

TABOO TRANSGRESSION TRANSCENDENCE

IN ART & SCIENCE 2020

Editors:

Dalila Honorato | María Antonia González Valerio
Ingeborg Reichle | Andreas Giannakoulopoulos

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TABOO – TRANSGRESSION – TRANSCENDENCE in Art & Science 2020
Interdisciplinary Conference Proceedings

Editors:

Dalila Honorato
María Antonia González Valerio
Ingeborg Reichle
Andreas Giannakouloupoulos

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Ioanna Logaki

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in Art & Science 2020

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**DALILA HONORATO - INGEBORG REICHLÉ
MARÍA ANTONIA GONZÁLEZ VALERIO
ANDREAS GIANNAKOULOPOULOS - ZAHRA MIRZA**

Introduction

ABSTRACT

Taboo-Transgression-Transcendence in Art & Science was conceptually born in Malta in November 2015. The first two conferences were held in person, in Corfu in 2016 and 2017. TTT 2018 transversed continents and celebrated its third version in Mexico City. TTT Vienna 2020 became an online event. This book includes most of the proceedings from Taboo-Transgression-Transcendence in Art & Science: Pandemic Special. This conference emerged in the climax of an economic crisis, Greece's Downfall, as an act of necessity to do something provocative in a moment when the general message was the denial of all sorts of support for research and art production. In 2020, in the heart of a pandemic and within a clear biopolitical crisis, the position adopted was one of resistance: gathering of any form will always be an act of activism. Moving online was a major challenge; when we decided to take that step we were not fully aware of all the risk factors that were waiting for us ahead. It was not easy, it was laborious before the conference and extremely stressful during the conference days where 200 speakers met virtually in a 72 hours non-stop streaming program. The analytics and the numbers tell us that TTT2020 Vienna/Online was a great success. Active users watching 24 hours a day for three days, 400 unique visitors each day from 45 different countries from all around the globe and strong engagement with hundreds of smart comments - what else would one ask for a flourishing international conference? These numbers outreach the previous editions of TTT and lead to the conclusion that the online format definitely supports increased attendance and participation. But we want more.

#TTT2020

The fourth international “Taboo – Transgression – Transcendence in Art & Science” conference took place November 26–28, 2020, in Austria and online all over the world, hosted by the University of Applied Arts Vienna with the support of the Interactive Arts Lab of the Ionian University. Including theoretical and art practice presentations, TTT2020 continued to focus (a) on questions about the nature of the forbidden and aesthetics of liminality as expressed in art that uses or is inspired by technology and science, and (b) on the opening up of spaces for creative transformation in the merging of science and art.

A brainchild of Dalila Honorato, the first and second TTT Conferences, held in 2016 and 2017 in Corfu, Greece, was sponsored by the Ionian University and supported by public and private institutions, mostly local. TTT2016 and TTT2017 counted, with the presence of Stelarc, Roy Ascott, Adam Zaretsky, Manos Danezis, Polona Tratnik, Gunalan Nadarajan, Irina Aristarkhova, Marta de Menezes, María Antonia González Valerio, Andrew Carnie and Kathy High as guest speakers. In 2016 and 2017, TTT teamed up with the Audiovisual Arts Festival and the Municipal Gallery of Corfu to host the exhibitions “Stelarc: Alternate Anatomies”, “iGMO: Adam Zaretsky” and “Body Esc” including works of artists Andrew Carnie, Alkistis Georgiou, Marne Lucas, Joseph Nechvatal, Kira O’Riley & Manuel Vason, Nikos Panayotopoulos, Ayse Gul Suter, Hege Tapio and Adam Zaretsky. After two magnificent editions on the island that gathered together an outstanding set of people, the conference traveled to the American continent and then back to Europe.

The most distinctive features of this international conference are its unconventional format, the community involved, and the sci-art topics addressed, which are attracting so many talented minds. Dalila Honorato has given her heart and commitment to the endeavour of turning TTT into a truly global community which is inspired by merging art with new scientific insights and cutting-edge technologies to move across borders and disciplines in order to foster our ability to think outside the box.

In 2018 many of us had experienced a truly remarkable TTT conference in Mexico City, which came with exhibitions, performances, and many wonderful conversations. Our colleagues in Mexico, motivated and guided by the commitment of María Antonia González Valerio and her community, made TTT in 2018 an unforgettable event, which took place at the Universidad Nacional Autónoma de México and Centro de Cultura Digital. TTT2018, coordinated in partnership with the program of the FACTT 2018 - Festival Art & Science Trans-disciplinary and Trans-national within the N Festival, included in its agenda the opening of the exhibition “Espacios de Especies” with artworks, among others, by Brandon Ballengée, Andy Gracie, Bios ex Machina, Jaime Lobato, Kathy High, Lena Ortega, Marta de Menezes, Plataforma Bioscénica, Robertina Šebjanič, and Victoria Vesna. The conference in Mexico was preceded by the TTT Satellite Physiological Bioart - Body Performance Live Art Event “BioCuerpos Perfor|m|ados”, organized by the Grace Exhibition Space in collaboration with Casa Viva Gallery, Paranoid

Visions UTA, and Anemonal, with performances, among others, by Boryana Rossa, Alexander Romania, Praba Pilar, Adam Zaretsky, Alejandro Chellet, Marita Solberg, Jacco Borggreve, Margherita Pevere, Cecilia Vilca and Lorena Lo Peña.

The TTT event in Mexico City was the blueprint of what we also wanted to achieve in Vienna in 2020. The University of Applied Arts would have provided excellent facilities with its numerous new buildings and would have been a most appropriate location to host the TTT community. The city of Vienna is home to a number of impressive institutions, which were eager to learn about the very topics that TTT conferences are addressing and developing since its early days. When COVID-19 hit us hard in March 2020, the art school closed its doors to fight the spread of the virus and so we decided to host TTT2020 Vienna in a virtual mode, keeping our community connected in the midst of this global crisis. As a consequence of the level of our unpreparedness to host a fully remote event, we all embarked on an unprecedented experiment. Nevertheless, we were fully aware that the outbreak of this pandemic would turn into a global crisis; however, it did not happen out of the blue. In the last two decades we have experienced two disease outbreaks caused by new coronaviruses that have jumped from animals to humans, and the current pandemic is the third that we are seeing (Sars-CoV, Mers-CoV, and Sars-CoV-2). Even if Homo sapiens has always consumed wild animals and the interaction of virus and bacteria among humans and animals is common, today it is our social and economic behaviour that is an important driver—we are destroying our ecosystems and putting enormous pressure on wildlife, which is currently losing its familiar habitats and its natural resources on an unprecedented scale. The way we foster mass consumerism, global trade, and our unparalleled mobility (which enables infections to spread so quickly) provides an ideal environment for the transmission and spreading of pathogens, which has the potential to cause global pandemics even more devastating than the current COVID-19 crisis.

For some time now, pandemics have been regarded as a major global challenge by a number of multilateral governance institutions that are tasked with analysing catastrophic risks and are making efforts to develop new models for more effective global collaboration and collective action. Global catastrophic risks are very rare, but when they happen, they are disruptive in the extreme.

There are still many lessons to learn from the current pandemic. Probably the most excruciating is to acknowledge the collapse of a worldview, defended since modernity in the Western world, which believed that reason was governing the course of the world. There was an immense belief that diplomatic channels, political institutions, and a civilised Western community would open spaces for dialogue and negotiation, in cases where we, as the world, would need to act together. Yet what we have experienced is the non-existence of institutions and the total impossibility of rational dialogue. Instead, what has prevailed is money and rampant capitalism; issues around pharmaceuticals and the actions of governments have shown us that the only thing governing the course of

the world is to make the rich even richer. There has been no solidarity, only naked ambition. We have learned that the richest in the world have increased their wealth by fifty percent, while the vast majority of people despaired. It is utterly outrageous to see how the big pharmaceutical companies have made gigantic profits from knowledge that rightly belongs to all of humanity and not to the absurdity of patents that rely on discoveries made since the beginning of time. This was a moment where we needed to act together, as a species, to save each other, to help each other. Instead of that, all we got was nationalism, borders, and the hoarding of vaccines and resources by rich countries. Rich in what? we could ask. Rich in a most exploitative capitalism that is destroying our planet? Well, probably.

Knowledge and expertise about global catastrophic risks and effective structures of global governance to confront them need to be widely spread, along with a different notion of justice, of care, of community, and of well-being. Although in 2022 we are still in the middle of this crisis, it is already clear that most governments did too little too late to fight the spread of COVID-19. Only some countries in Asia were better prepared because they had learned their lesson from the SARS outbreak in 2003. And yet, at the same time, we have seen the price being paid by the populations in Asia that were and still are forced to lockdown in extreme conditions. The lack of leadership and governance for managing, reducing, or even eliminating this pandemic shows deficits on many levels, and make it obvious that we have to break down old silos and set aside narrow national and political interests. We all have to learn our lesson from the failures in global cooperation to date, because pandemics like the COVID-19 crisis or other global catastrophic risks do not stop at national borders.

When we have overcome this pandemic in the years to come, in the aftermath of the virus we shall have to start to reflect about the fact that this situation has increased the appreciation of living online—something that will likely continue and even grow once we get through this crisis. Also, we will have to talk about the uneven level of preparedness for moving our lives into virtual worlds, because this crisis has exposed once again the massive scale of existing inequalities. Technology is not ubiquitous, is not equal, and it has never been democratic. And even if we recognise that the virtual worlds have produced incredible opportunities for exchanging ideas and for continuing to work, we need to acknowledge at the same time that living online has its tangible limits. On one side, it uses a tremendous amount of energy and fosters the production and consumption of technological artefacts, and on the other side, it cannot and will never be a substitute for physical presence: we need to reconsider what it means to be there, at a conference for example, with one's whole body and not just with eyes and ears plugged into a screen.

In November 2020 it was not just the pandemic that made the temperature drop in the atmosphere of Vienna, but also in its overall morale as we faced a brutal terror attack that claimed the lives of innocent victims—killing four people

and injuring 23, seven with life-threatening injuries, including two students of the University of Applied Arts Vienna. This terror act was a series of shootings that occurred on 2 November 2020 only a few hours before the city was due to enter a second lockdown light because of the COVID-19 pandemic. A gunman started shooting in the city centre of Vienna, only some hundred meters away from one of the art school's buildings. The attacker was killed by police and later identified as a sympathiser of the Islamic State.

The different editions of TTT have contemplated developments in science and technology that seem to enhance the borders of our experience of worlds and selves, revealing sometimes the fragility of social values. The TTT community has proposed critique within transdisciplinarity, where science, arts, and humanities meet in a research quest, in an attempt to reframe and reconfigure what there is.

TTT has always been transgressive and subversive. What constitutes the unstable limits of what can be morally and epistemically accepted should be read within the historical horizons of cultures and circumstances. After all, what seems outrageously transgressive at one moment in time and from one perspective may eventually transform into a commonplace practice. As we experience and even endorse a gradual, but substantial, de-centring away from anthropocentric values and ontologies, critique potentially harbours turmoil. Art practices pose critical questions about our certainties; sciences and humanities constantly test our limits and our ideas of worlds by pushing forward the conditions in which knowledge is produced.

By focusing on diverse ways of fostering transgression and transcendence in art, science, and the humanities, with the TTT 2020 Vienna call we were searching for art practices that pose critical questions about our certainties concerning the conditions and circumstances in which knowledge is produced. We were also interested in learning more about artistic strategies, which are eager to engage with current developments in science and technology, especially those that seem to enhance the limits of our experience of our worlds and ourselves, revealing sometimes the fragility of social norms and values. With TTT 2020 Vienna we intended to offer our community a stimulating framework for transdisciplinary exchange and profound critique about the ways identities, ideologies, multiplicities, worlds, and visions get accepted or rejected, invented, or destroyed. We promoted collaborations between artists and scientists to amplify ways of knowing that will enable the circulation of epistemic reflection within diverse fields of knowledge through a diverse set of formats. Such a transfer process of styles of thought or thought collectives was articulated almost a century ago by the Polish scientist Ludwik Fleck (1896–1961) in his publication “Entstehung und Entwicklung einer wissenschaftlichen Tatsache” [Genesis and Development of a Scientific Fact], which was first published in German in 1935 (by the Schwabe Verlagsbuchhandlung in Basel) and in English in 1979 (by the University of Chicago Press in Chicago with a foreword by Thomas Kuhn, whose 1962 book *The Structure of Scientific Revolutions* became very influential in the academic world).

During the second half of the twentieth century, Fleck's book evolved into the most significant contribution to sociological accounts of scientific knowledge. With his monograph, Fleck aimed to explain how scientific ideas change over time and that scientific facts are culturally conditioned. The key argument in Fleck's sociological investigation about the production of scientific facts points out that scientific knowledge is always produced under certain socio-cultural and psychological conditions and therefore can neither be evaluated separately from the context in which it takes place nor the people who are involved. In his descriptions of the development of scientific insights, Fleck repeatedly refers to the changes and transformations that go hand in hand with an exchange of thoughts and ideas—whether within a particular scientific community or between disciplines or art and science. In this exchange process Fleck found an auspicious source for the discovery of new knowledge because one is obliged to get acquainted with new epistemologies or the logic of a different scientific regime. Such transfer processes of styles of thought would stimulate the readiness for new perspectives thereby opening up opportunities for creating new insights, while also rethinking and perceiving existing scientific praxis and discourse in a fresh way. Deeply convinced that the interaction of art, science, and the humanities is capable of fostering insights about much-needed social transformations, we initiated in Vienna fruitful dialogues, interactions, and unexpected opportunities between artists and scientists.

Whereas in the early days artists who engaged with science primarily sought to reveal the state of the art of cutting-edge technology or aimed to detect the epistemological shifts caused by the technoscientific regime, current practices are responding to the growing ecological crisis we face with practices often referred to as ecological art or “eco art” as a comprehensive term denoting art's commitment to environmentalism. In recent years social justice and ecological integrity have found increasing resonance in the contemporary art world, giving rise to a wide range of artistic strategies located at the intersection of art and science.

TTT2020 Vienna/Online was thus also a contribution to current transformative sustainability research for it explored the expanding field of aesthetic practices engaging with ecological emergencies and the politics of ecology with the goal of advancing the innovation of dynamics for collaborative and sustainable ways of being. A number of contributions presented artistic responses to the growing ecological crisis by showing meaningful visual artworks or collaborative actions to increase community resilience, or in order to inspire individual actions directed towards systemic change, or to foster changes in individual attitudes and behaviours to become active players in the much-needed dynamics of socio-ecological transformation processes towards a more sustainable future.

The question that was driving several presentations was to understand how and under what conditions such niche innovations, which seem to work successfully in hybrid and artistic contexts, can be condensed and upscaled to innovative transformation paths - stabilising new and more sustainable regimes.

Is it possible to transfer diverse forms of transformative aesthetic literacy to other areas of our fragile societies in order to enhance new social practices and to promote positive change through futures literacy?

Many questions remained open, and many new ones were posed during the conference. The growing TTT community will continue, in further editions, to address these topics that are not only our continuing interest, but also that gather us together in the thinking and producing of different possibilities to cohabit in this very much broken world. Since its beginning TTT seeks to provide a comfortable setting for the interaction of its participants and the students of the academic institution hosting it. This is accomplished through coordinating the conference's agenda with the development of other activities such as art exhibitions, screenings, live performances, book presentations, poster exhibitions, and workshops developed in collaboration with other organizations. Among the outcomes of the conference are its proceedings, initially published only as a free digital by the Ionian University, and since 2017 also gathering a selected number of papers as a special issue in the *Technoetic Arts* journal published by Intellect. The proceedings of TTT2020 Vienna/Online are published in two parts: over three issues of *Technoetic Arts* journal and in this open-access publication.

This book, following the structure of the conference, includes 50 chapters by 73 authors (order of entrance): François-Joseph Lapointe, John Santomieri, Felipe Shibuya, Alvax aka Valeria Di Sabato, Natacha Lamounier Ribeiro, Zsófia Jakab, Adnan Hadzi, Nobuhiro Masuda, Andrea Gogová, Maria Athanasekou, Roxani Giannou, Evmorfia Leventi, Claudia Schwarz-Plaschg, Maria Manuela Lopes, Evaguelia Diamantopoulou, Jatun Risba, Kimberly Johnson, Rudolf Arnold, Gudrun Wollnik, Julia Sprenger, Maria Chalkou, Amalia Foka, Miguel Oliveros Mediavilla, Arantzazu Saratxaga Arregi, Yanai Toister, Jose Hopkins Brocq, Cecilia Vilca, Lorena Lo Peña, Kim Doan Quoc, Yosaku Matsutani, Anna Kedziora, Tina Mariane Krogh Madsen, Ziwei Yan, [M]Dudeck, Niki Sperou, Paula Nishijima, Michael Manfé, Mihai Băcăran, Erik Zepka, Roberta Buiani, Erik Vogt, Kazuhiro Jo, Roy Tamaki, Takuya Ishikawa, Tomoya Matsuura, Nigel Llwyd William Helyer, Luc Messinezis, Apostolos Loufopoulos, Mark Horvath, Adam Lovasz, Marius Armonas, Vasileios Bouzas, Ksenia Yurkova, Nicole Clouston, Annick Bureau, Kathy High, Marta de Menezes, Jennifer Willet, Byron Rich, Paula Burleigh, Francesco Kais, Monica C. Locascio, Pêdra Costa, Zosia Hołubowska, Florentina Holzinger, Daniela Brill Estrada, Elisabeth von Samsonow, Karolina Żyniewicz, Regine Rapp, Christian de Lutz, Christl Baur, Jill McDermid-Hokanson and Adam Zaretsky. Together these chapters represent the online program of TTT2020, divided into sessions, roundtables and artboxes, numbered without much sense of linearity simply using the coronavirus spike proteins side-by-side with the usual one word naming that have characterized other TTT conferences: NSP13 / Moist, NSP2 / Brute, ORF8 / Sideways, NSP14 / Automaton, NSP10 / Phrenic, NSP12 / Epic, NSP16

/ Allure, NSP15 / F-word, NSP3 / Mold, NSP9 / Channel, NSP5 / (W)Hole, NSP1 / Creature, NSP7 / Demise, ORF1ab / Tonic, ORF6 / Tutelage, ORF7b / Index, ORF7a / Equipoise, ORF9b / Auspice, NSP6 / Growl, ORF10 / Crack and NSP8 / Sustenance. Strangely this seemed to make more sense than any attempt to represent order.

So, yes, we guess that after all the joint efforts of organizers and participants in TTT2020 Vienna/Online definitely were worth it, and this book is here to prove it! But we want more now. As if the pandemic was not enough, we are emerged throughout 2022 in multiple humanitarian crises caused by international warfare and growing civil rights restrictions pushed by patriarchal zealous going retro-overboard. More than ever it is important to support our diverse network of people, our weirdos united. We need to meet again in person in one single place this time. The next TTT will be in Valletta, in the island of Malta where the conference was for the first time imagined, now it's time to put it in practice, so please don't forget to save the date: 27-29 September 2023, we hope to see you at the fifth edition of Taboo-Transgression-Transcendence in Art & Science.

How to Shake Hands [and interact with each other] After a Pandemic

ABSTRACT

Shaking hands with thousands of individuals is one of the experimental performances I have been conducting in different cities around the globe, but not anymore! In the early months of 2020, as I was about to fly to China to present the *1000 Handshakes Project*, the world was suddenly hit by the Covid-19 pandemic. With social distancing practices being enforced globally, social contacts among strangers have been suddenly frowned upon, if not declared illegal by local authorities. No hugs! No kisses! No handshakes! As part of my work as an arts scientist, I like to challenge the fear and fascination that people have with bacteria, viruses, and other types of so-called germs. I engage in various performances to hack my microbiome by interacting with others and my environment. All of it seems very improbable now, or impossible to contemplate in the years to come. In this paper, I will address some of my current concerns about my future practice as an artist working with pathogens.

KEYWORDS Performance art, contagion, microbiome, viruses, pandemics.

INTRODUCTION

For the last eight years I have been shaking hands with people

Travelling from town to town around the world
I meet strangers and I shake hands with them

In Copenhagen, Montreal, and San Francisco thousands of handshakes

In Germany, France, and Australia
over and over again
I put my right hand forward and I shake hands

The handshake is a permission
The handshake is a transaction
The handshake is a declaration
an interaction
an exploration

Sometimes, it is an aggression
a confession
a revelation
an urgent need for compassion

Yet every handshake is about transmission
bacterial infection
viral contamination

As part of my handshaking performances,
I study the dynamics of microbial circulation
I give and take bacteria every time I touch you
I use my body as a canvas
I paint my skin with germs

What are human contacts, but microbial exchanges?
What are human beings, but walking bags of microbes?

We inhabit the microbial world
Microbes live on us, around us, and inside of us
Every single orifice of our bodies is populated by millions of microbes
We breathe microbes
We eat microbes
We swallow microbes
We digest microbes

We defecate microbes
The genome defines what we are as a species
The microbiome defines what it is to be human

Individuals are no longer the individuals that we imagined
Organisms are no longer the organisms that we identified
Species are no longer the species that we once believed

We are all part of a complex web of microbes
We are born microbes
We will die microbes

As I shake hands with hundreds of people,
more and more bacteria keep piling up in the palm of my right hand

Like an invisible thread,
my skin memorizes the sequential waves of bacterial migration

The mapping of human relationships
translates into a complex network of interactions among bacterial strains
that leave a trace in the palm of my hand

One handshake at a time, I am changing my bacterial identity
One handshake at a time, my metamorphosis is underway

I seek to voluntarily modify the composition of my microbiome
to transform the person I used to be

I seed my skin with the microbes of everyone I meet and touch.

STOP

March 13th 2020 was on a Friday

As I was walking towards the University to give a lecture on creationism,
the World came to a full stop
I never made it to my classroom!
The students were sent back to their bedrooms
their kitchen tables
their parent's basements

The semester was postponed indefinitely
the school year was in jeopardy

My lab was shut down as my art practice was put on hold
Over the next 408 days (and counting)
I have gradually transformed my living room into a home office

No more conferences
No more business trips
No more family gatherings
No more holidays

I have reduced my carbon footprint dramatically,
albeit at the expenses of my mental sanity and physical health
I have developed chronic back pains
I have suffered from frequent migraines

Going to work now amounts to connecting to TEAMS
Meetings with graduate students are nothing but recurrent dreams

I have had hundreds of zoom calls/conferences/meetings/lectures
as early as 3AM and as late as midnight with no end in sight

I have been separated from my previous life for over a year
And I keep wondering about the future of humanity (Image 1)



Image 1. A rat in a cage. © FJ Lapointe

the next hug?
the next kiss?
the next concert?
the next orgy?

What lies ahead for us?
How will we shake hands after this pandemic?
How will we have sex after this pandemic?
How will we give birth after this pandemic?
How will we interact socially with others after this pandemic?
How can we recover?

WHAT THE COVID-19 RESEARCH SHOWS

Recent studies have shown an increase of anxiety among children during the pandemic (Parsons, 2020).

Recent studies have shown an increase of anxiety among adolescents during the pandemic (Guessoum et al., 2020).

Recent studies have shown an increase of anxiety among healthcare workers during the pandemic (Pappa et al., 2020).

Recent studies have shown an increase of anxiety among college students during the pandemic (Son et al., 2020).

Recent studies have shown an increase of anxiety among pregnant women during the pandemic (Kotabagi et al., 2020).

Recent studies have shown an increase of anxiety among the general population during the pandemic (Salari et al., 2020).

Recent studies have shown an increase in postpartum depression during the pandemic (Mariño-Narvaez et al., 2021).

Recent studies have shown an increase in insomnia during the pandemic (Pinto et al., 2020).

Recent studies have shown an increase in financial precarity among artists during the pandemic (Visanich & Attard 2020).

Recent studies have shown an increase in bankruptcy among small business during the pandemic (Bartik et al., 2020).

Recent studies have shown an increase in suicide rates during the pandemic (McIntyre & Lee, 2020).

Recent studies have shown an increase in pornography use during the pandemic (Mestre-Bach, Blycker & Potenza, 2020).

Recent studies have shown an increase in violence against women during the pandemic (Roesch et al., 2020).

Recent studies have shown a decrease in desire to have children during the pandemic (Micelli et al., 2020).

While reading the research papers and conference reports,
I keep asking myself
- Is coronavirus REALLY the end of the world as we know it?

WHAT IS A HANDSHAKE?

What really happens when we shake hands?

First, we look at each other
we exchange light waves which are interpreted by our brain in different ways
I know this person
I don't know this person
She looks familiar
They looks pretty
He looks dirty

As we touch, there is another form of exchange
a transfer of bacteria that I carry on my hand and that the other is also carrying

When I shake hands with someone, the transformation is always real
sometimes it can be lethal.

How is a wart transmitted?
How is the flu transmitted?
How is Ebola transmitted?
How is COVID-19 transmitted?

One handshake can transform you forever
One handshake can even kill you

FROM ONE THOUSAND HANDSHAKES TO ZERO HANDSHAKE

Since handshaking is not available during a worldwide pandemic
and as a way to reinvent myself
I have been performing a covid-friendly project that I call ZERO handshake
(as opposed to the 1000 Handshakes Project)

I go to multiple locations
In the middle of the night
or in full daylight
while wearing my PPE – Personal Protective Equipment (Image 2)



Image 2. Zero handshake project. © FJ Lapointe

I document the pandemic
social distancing
lockdown
quarantine
isolation
depression
skin hunger
loneliness
separation
vaccination

Alone in my hometown
With no human contact whatsoever

Wherever I go
Whenever I go

Hopelessly, waiting for someone
Till the end of time
...or at least till the end of this nasty pandemic (Image 3)



Image 3. Waiting till the end of this nasty pandemic. © FJ Lapointe

FAST FORWARD TO THE FUTURE

Yesterday, I got vaccinated
Tomorrow, maybe, I will be return to my normal life
With a new normality
A new form of timid anxiety

Novel ways of interacting
Novel ways of communicating
Novel ways of touching each other

With masks and distancing
With gloves and frequent hand washing

I never imagined that my most dangerous performance would be to shake hands with thousands of strangers

I never imagined that my most precious performance would be to shake hands with just one stranger

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Ah, Squoosh it: Decolonizing the Colon

ABSTRACT

Squoosh is an effort to decolonize the gay colon from its governing politics of implicit cultural values; those that often necessitate performative interventions which predispose the region to sexually transmitted diseases during homosexual intercourse. In an attempt to be 'clean'—largely an effort to rid the body of its nonhuman aspects such as organic materials and microbiome, cleanliness rituals such as rectal douching do more harm than benefit human health, and function to reinforce the dominance of othering practices and sub/dom hierarchies. In an effort to queer the view of cleanliness within the landscape of the gay body and its sexual practices, we imagine Squoosh as alternatives to harmful rectal douching, and reimagine choices equally beneficial to both human and nonhuman participants and their mutualistic wellness.

Acknowledgements

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KEYWORDS Body, Decolonization, Douching, Feminism, LGBTQ community, Microbiota.

INTRODUCTION

Squoosh is a collaboration between two queer artists, John Santomieri and Felipe Shibuya, whose main objective is to promote discussions on how queer identity is embodied and subjectivated by macho, patriarchal societies, and how the queer physical body exists in forms as a colonized landscape (Fanon et al., 2008; Rice et al., 2020; Sekyi-Otu, 1997). In this article, Squoosh brings to the table a discussion of how specifically the douching process has oppressed and still oppresses women and the LGBTQ community through a ‘cleansing’ of the body and consequently, the loss of micro-diversity and identity, often to the detriment of wellness. The work here is presented in the form of film slides taken from a performance for the fourth conference Taboo - Transgression - Transcendence in Art & Science conference, held online in November 2020.

TABOO

It is known that the human gut contains a large community of microorganisms, also known as gastrointestinal microbiota, that helps in the digestion process, in the synthesis of vitamins, and in the protection against harmful external agents (Heintz-Buschart & Wilmes, 2018). The diversity and density of this microbiota are strongly correlated with factors that have been well studied, such as the host’s diet and drug use (Hooper et al., 2012; Sommer & Bäckhed, 2013). However, the balance of this rich community is also affected by numerous other external factors that are still poorly understood, especially in considering interactions with cultural and performative phenomena such as douching.

Douching is the process of washing certain regions of the body, such as the vagina and rectum, by introducing a jet of water or chemically processed liquid into these cavities (Cottrell, 2010). This process is often used by the LGBTQ community and heteronormative women to ensure cleanliness of their body cavities before sexual intercourse. Despite its apparent benefits, douching is an extremely invasive process that weakens the intestinal mucosa and therefore the vagina, rectum and colon. Douching may cause a series of complications from bacterial infections, to an increased risk of contracting sexually transmitted diseases, and cervical cancer (Brotman et al., 2008; Ham-brick et al., 2018; Schilder et al., 2010; Zhang et al., 1997). Although rectal douching predisposes the body to incurable diseases such as HIV/AIDS, it is often felt necessary to being perceived as ‘clean’ and sexually desirable, and to experience sexual pleasure within the context of homosexual intercourse among men (Schilder et al., 2010).

Because it is a process associated with what is considered “impure”, douching is a topic permeated by taboos. It carries with it the absence of discussion, echoing a loss of microbial identity, and repression suffered by the communities that practice it (Image 1; see Abma et al., 1995; Carballo-Diéguez et al., 2018; Merchant et al., 1999; Schilder et al., 2010).



Image 1. Film slides taken from the Taboo part of the performance presented at the fourth Conference Taboo - Transgression - Transcendence in Art & Science, November 2020.

TRANSGRESSION

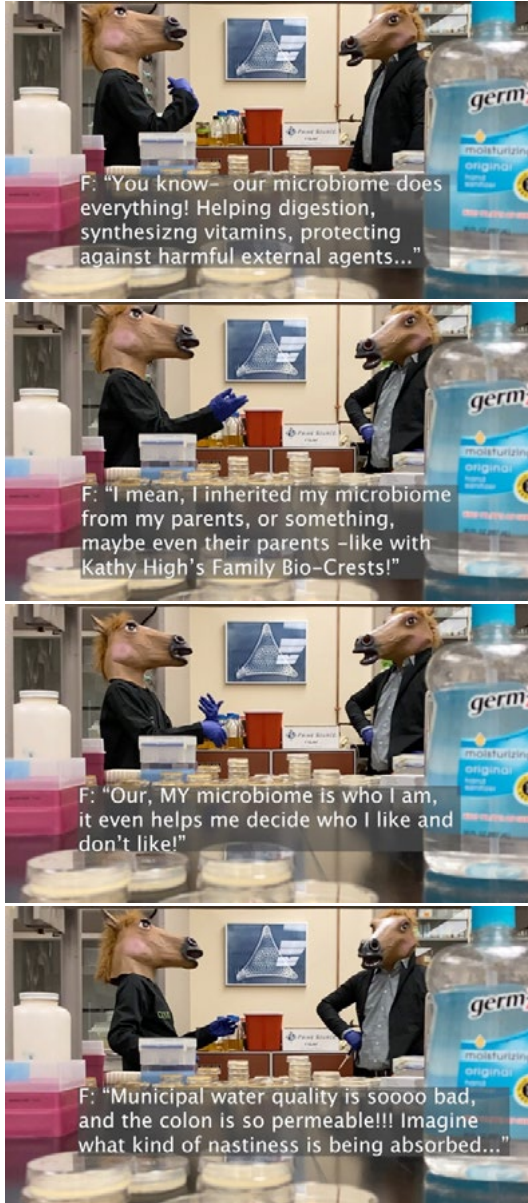


Image 2. Film slides taken from the Transgression part of the performance presented at the fourth Conference Taboo - Transgression - Transcendence in Art & Science, November 2020.

TRANSGRESSION

In the United States, douching has had a long relationship with feminism. Historically douches were used by women as a form of contraception for centuries, but they have also considered and perpetuated the vagina (and women) as undesirable, odorous, and dirty (Crann et al., 2017). Social and kinship pressures, often instigated by well-funded ad campaigns, have helped interpolate such negative associations and values of clean vs. unclean into personal identity narratives, creating a desire for women to use toxic bleach-based products such as Lysol harmful to their physical bodies (Heller, 2019; Jenkins et al., 2018). Although controversial, vaginal douching is still widely used (often in higher rates by women of color), and rectal douching especially by the LGBTQ community in gay and trans populations (Annang et al., 2006; Crann et al., 2017; Jenkins et al., 2018; Schilder et al., 2010).

In these scenarios, the quality of the water used for douching is also an important point of discussion, since it directly affects the health of the microbiota, and is in contact with one of the most permeable organs of the body (Bischoff et al., 2014; Hansen et al., 2018). Although water quality in the United States is considered “safe,” millions of people do not have adequate access to this resource (many of which live in marginalized communities). These reasons range from inadequate water treatment by government agencies to the lack of maintenance of the plumbing in the homes (Patel et al., 2020).

Beyond the nefarious and physically harmful agenda of the douche, specifically on women, queers, and persons of color; what does it mean to strip away not just protective mucal linings, but bacterial lineages that have accumulated in human families? This is seen visualized by artist Kathy High’s artworks, *The Landscape of Lost Microbes*, and *Family Bio-Crests* (High, 2020). This loss of bacterial diversity may be the loss of intraspecies diversity and personal identity, executed by predominantly western misogynistic and colonial ideals of cleanliness (Image 2).

TRANSCENDENCE & TRANSFORMATION

Throughout human history, the queer body and the female body—among othered kinds of bodies—have been depressed by views of what is “correct, beauty, pure and clean” (see Crann et al., 2017; Fanon et al., 2008). This patriarchal (and again, colonial) vision has established taboos of the body that have sustained over time, spanning generations and cultures (Rice et al., 2020). As these taboos come into debate, and especially when introduced by those who have experienced their own bodies oppressed and victimized, discussions arise that promote necessary confrontations. These become opportunities for envisioning change, and giving voice to those previously obscured and marginalized, and in the case of the human microbiome, to those nonhuman. As we begin to better understand the impacts our microbiome has on personal identity, health and wellness, we must reconsider actions that perpetuate ideas of the human self as something that is solely human, or at least exclusively one type of human, and one separate from its larger ecology (Image 3).

TRANSCENDENCE

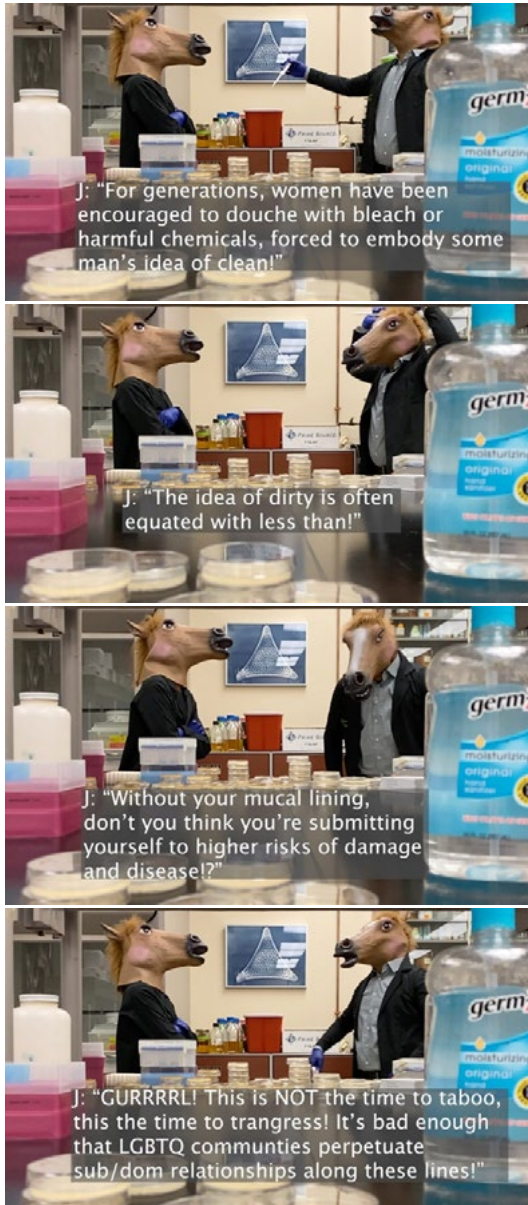


Image 3. Film slides taken from the Transcendence part of the performance presented at the fourth Conference Taboo - Transgression - Transcendence in Art & Science, November 2020. © Courtesy of the authors.

TRANSFORMATION

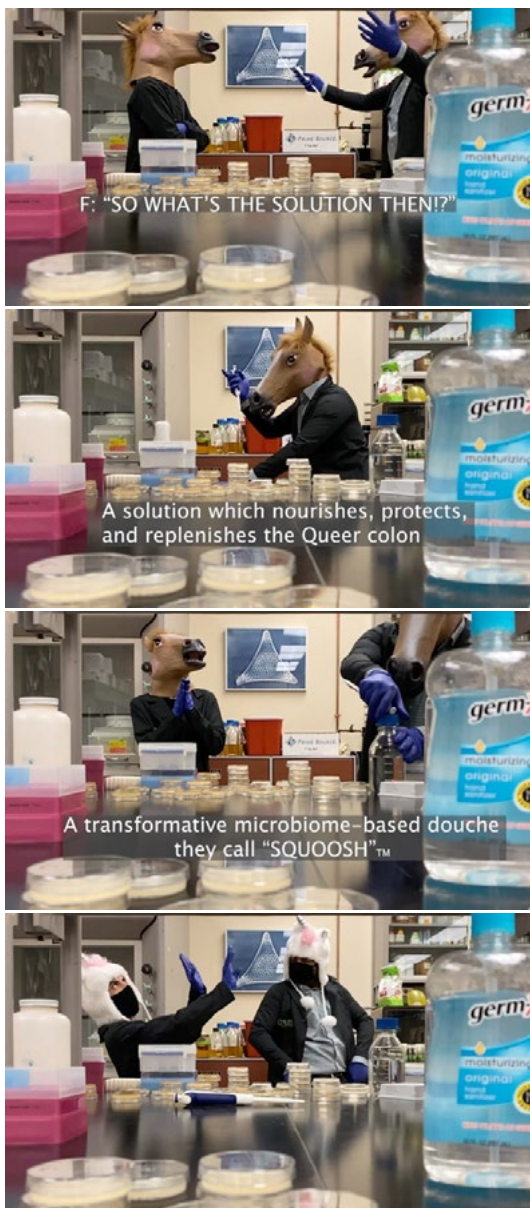


Image 4. Film slides taken from the Transformation part of the performance presented at the fourth Conference Taboo - Transgression - Transcendence in Art & Science, November 2020. © Courtesy of the authors.

Squooosh aims to initiate and engage in a conversation about queering conventional colonial relationships to both body and landscape, and looking past the human self and toward its ecological interconnectedness. Using the colon and rectal douching as a microcosm of gay behavior, we question the function of gay cultural performances such as rectal douching and its necessity, especially when they function to perpetuate harmful effects such as disease susceptibility. While we acknowledge the vast benefits of ‘clean’ in the context of biomedicine, we ask what does it mean to be ‘clean’ and what stakes are involved. We question the overarching value system of clean vs. dirty, and its binary historical usage in perpetuating colonial and capitalist exploitations of both the landscape and the human body. In our practice, by documenting the microbiome and how it is affected by these arbitrary cultural interventions, by expanding and transgressing taboos through conversation, creating performances of water sampling and looking for resolutions and / or alternatives for douching such as healthy diet and advanced physical solutions, we hope to transform the physical body from previous conceptualized modalities that exclude nonhuman awareness and holistic conceptions of the self. To do so, we seek to include the ways in which queer persons function organismally, and identify themselves sexually through physical intercourse, and transcend from potentially harmful stereotypes and applied cultural values such as ‘cleanliness’ and ‘purity’ (Image 4).

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Agnus Dei_A/V Project Beyond the Faith

ABSTRACT

The “*Agnus Dei*” audiovisual project (Sound, 2020) explores the many facets of the concept of algolagnia, starting with the basic interpretation of masochism and ending with the consideration of submission/humiliation of the individual seeking physical pleasure through the production of endorphin. The state of self-pleasure is the result of an almost spiritual elevation, freeing the individual who worships pain from discomfort, as if this was a divine entity. These impulses towards pain as an end in itself, are connected acoustically and visually to the concept of the Lamb of God embodied in the extreme form as Christ, to whom the nature of sacrifice and the atonement of all sins is attributed. Visually all the clips have been downloaded from pornographic productions and specifically bondage material from the dark web, reinterpretations of passages of the Bible and footage of the Mysteries of Trapani, a sacred event that takes place on Good Friday representing the Via Crucis. The role of the Virgin Mary is fundamental, both in the procession as well as the Oedipal relationship that is addressed in the following chapters. She represents the Mother of all mothers, linked to death and eternal rebirth. The cathartic moment is derived from the *embodiment* that the procession music evokes in the people. The tension of the moment is expressed via the meltdown of a collective hallucination. The video clips have been processed with the data bending technique, so that the audio errors applied to the video confer a distorted and glitch look to the visual. The audio section was sampled and sculptured from the original Agnus Dei version by Samuel Barber using granular synthesis. Various levels were then added to this basic format that continually refer back to the base track, creating tense spaces and immersive drones that are reminiscent of techno culture. The project was presented as part of the sound art events in the Errant Sound space in Berlin.

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KEYWORDS Algolagnia, databending, glitch, error, bondage, faith.

THE AESTHETIC OF ERROR_GLITCH ART/DATABENDING/DATAMOSHING (in a society that demands image perfection)

Errors. Codes. Discoveries.

Agnus Dei (Sound, 2020) is a visual celebration of the art of imperfection. The stylistic technique applied to the processing and post-production of video fragments are databending and datamoshing that are both branches of glitch art. The term databending derives from circuit bending, a short-circuit technique that is applied to objects such as children's toys in order to create irregular and spontaneous sounds. Audacity software is used for databending and datamoshing whilst Adobe Premiere is used for the final cut and Ableton Live for audio production. The distortion of images, created by the application of audio effects such as echo, reverberation, compression and video delay enable the interpretation of the raw data of the image files, often inverting the sense of the image itself by obscuring, duplicating or highlighting certain sections in a random manner.

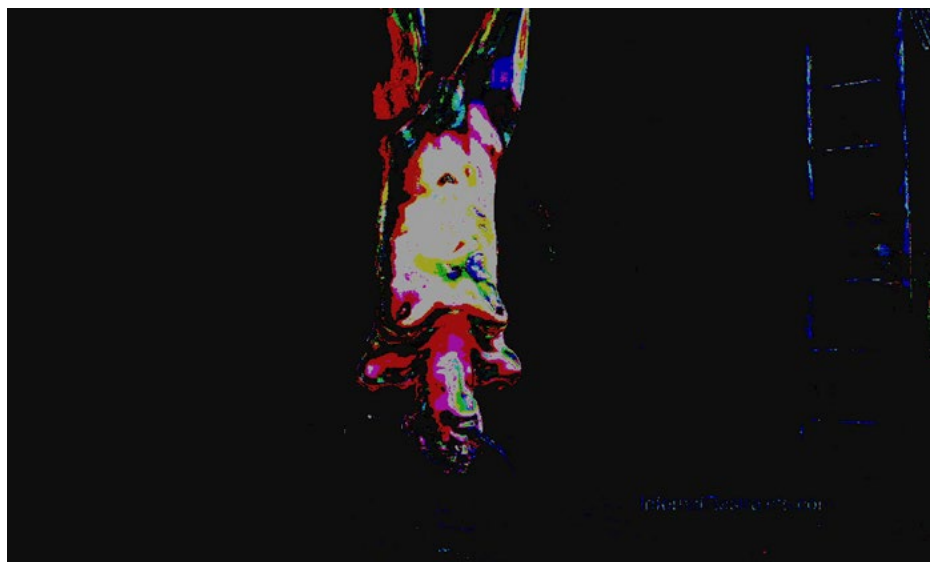


Image 1. © Bondage practices from the Dark Web, Glitch art by Valeria Di Sabato.

The selection of clips was central to the final cut of the project, part of the sections was derived from BDSM pornographic videos on the dark web. Another part of the videos was drawn from a Hentai video series, representations of the passion of Christ and the Mysteries of Trapani procession during Good Friday.

Error is nothing more than deviation from that which we expect, and it is this loss of obsessive control of image perfection that interconnects all the parts of

Agnus Dei. It is the “noise” that comes from the application of the audio effects of the image that resonates along with the soundtrack.

There are numerous techniques, including the use of hex editors that are used to manipulate certain components of a compression algorithm, as well as relatively simple methods. The interpolation of audio data is a re-interpretative sub-category known as sonification, in which audio effect data is introduced at the same time as musical data. This is the most complex technique and often creates unpredictable results.

Alva Noto is undoubtedly one of the most famous glitch music artists, his work being recognizable by the obsessive use of white noise. His musical patterns are generally divided and accompanied by sinusoidal sounds combined with white noise to create overlapping and offsets, resulting in complex cycles with simple forms. According to Giacomo Albert: “The composition of audio and visual dimensions is based on the study of properties emerging from the varied and regulated combination of oscillating, periodic and elementary phenomenon” (Albert, 2014). Undoubtedly one of the most influential works is *Unieqav* (Noto, 2020). Noto explains that the compositions sonically represent submersion in water. Water, an enormous container of white noise, plays a significant role in the creations of many artists and is also fundamental in *Agnus Dei*.

OCEAN SOUND AND ANCESTRAL NOISES: THE ESSENCE OF WHITE NOISE

The *fil rouge* of the *a/v* screening is the constant presence of noise and its connection with water, as we have already seen in the case of glitch distortion in the visual field and above all it is fundamental in the audio aspect. The Samuel Barber track was decomposed and re-elaborated using Granular synthesis apart from other techniques. This synthesis technique uses samples of elementary acoustic elements as granules (micro-sounds). As a definition: “The granules last from 1-50 milliseconds and can be combined and reproduced with variable speeds, phases and ranges. The result is not a single tone but a cloud of sounds that is manipulated in a different manner from any natural sound or from any other means of synthesis” (“Sintesi granulare”, 2021). This method permits the creation of extraordinarily complex textures starting from basic granules. The brief duration of each granule creates “noisier” sound compared to the sound sample of longer duration. The drone noise in *Agnus Dei* was sculptured from granules of the original track by Samuel Barber. The same sample was used to generate textures, pads, layered glitch noises and were alternated with Hentai samples and percussions.

White noise is a great theoretical idealization, in as much as it refers to the entire spectrum of audible frequencies that are non-periodic in time and of a constant range. White noise has already been recognized and used as a relaxant, it is believed that this noise be beneficial - particularly in inducing sleep - for newborns in intensive care units, who have been exposed from the first day of life to indefinite and constant noise, created by the sounds and vents of life-saving equipment and monitoring devices. Other studies have repudiated this theory, claiming retardation in cognitive development in instances of over-exposure to excessive noise.

In a sense white noise can be seen as a type of sound shell that engulfs the rest of the audio soundscape and estranges us from the declared audio world. The neuroscientist Seth Horowitz (2012) stated that “White noise is literally a wall of audio energy, without patterns”. This frequencies container is not only artificially present but also exists in nature, particularly in water. The amniotic experience is the first sub-aqua experiment of every human being who in some ways remains connected to this oceanic bliss that is sought even in adulthood.

OEDIPAL RELATIONSHIP AND SUBLIMATION IN VIRGIN MARY

To Freud (1975) “It is this very desire for fusion with the other that is perceived as a sexual act, expressed through the desired to return to the womb. It is an attempt by the Ego to re-enter the womb, re-establishing the joyous pre-natal condition in which the separation between this Ego and the external environment was as yet unestablished”. The constant and incessant desire to return to the womb as a refuge from the pain of the world can be traced back to the quest for ecstasy with the desire to abort from the world, this concept is part of the Buddhist philosophy and the world of desire: Kamadhatu the world in which one is dragged in transmigration. This maternal re-establishment can be perceived as a form of mystical pleasure and replacement for the sexual act as a regressive and psychotic experience.

To James (1901-1902) “The religious experience is the sensation of breaking free of the limitations of the Ego and communion with the divine”. It is in these very states of mystic delirium that we become one with the Absolute and aware of our unique nature. This ecstatic experience of transposition of the limits between the Ego and the Non-Ego is one of loving union with God and is expressed in phenomenon of a psychotic nature such as visions, raptus, trances, the perception of odors, lack of appetite and levitations. All of these have been attributed to para-mystical and hence non-spiritual phenomenon.

The desire for a deep bond with the surrounding world, resulting from the destruction of the Ego barrier, takes us to the concept of the oceanic sentiment. The term was also borrowed by Ramakrishna, to refer to the symbol of the ocean as a borderless totality in which multiplicity is dissolved and opposites attract. According to Freud, the religious sentiment that derives from human abandonment and nostalgia for the protective father is the primitive force that is retained by the Ego in adult age. In fact, an infant does not distinguish between his/her body and the maternal breast; the ego and all objects are one and only successively will it come to be separated from the external world. Certain mystical techniques such a yoga can permit the regression to this premature phase of the concept of ego.

In French “la mer (the sea) is similar to la mère (the mother)” (Lacan, 2006;2007) and according to Faidman and Frager (1979: 165) “[t]here is a continuum of the cosmic conscience, against which our conscience only constructs inadvertent precincts and within which our different minds immerse as if within a mother-sea or a reserve”. From Freud’s perspective, music along with mysticism, is interlinked with the mother. As is the case with music, the concept of mysticism is connected with the Id (representation of the inner voice of the human spirit, with an erotic propulsion and connotation). Furthermore, many of

the most extreme religious experiences, such as hallucinations are derived from the unconscious need to sublimate aggressive impulses or repressed sexuality.

The Image of the Virgin Mary is the ultimate expression of maternal love. Collapsing in the Via Crucis she takes on the suffering of the crucified son. The theme was also explored in the late medieval period in iconographic works known as the Swoon of the Virgin. The sublimation in the Regina Mater is the contrast of sensuality and Eros and the maximum expression of abandonment to the Nirvana ecstatic state par excellence.

THE ECSTASY OF SAINT THERESA

“It is Eros, armed with a long dart, the iron point of God himself”.

Teresa Sánchez de Cepeda Dávila y Ahumada

We have explored the idea of how mystical ecstasy is likened to the delirium of the mad. The maniacal interest in the experience of “delightful pain” that is defined as unio mystica (the mystical union). These were the thoughts of the psychologist Henry Leuba, for whom mystical ecstasy is insufficiently satisfied sexual excitation.

The theme of delirium and the essentially nirvanic state, contiguous to the land of the pulsation of death, are considered in the analysis of the ecstatic mind of Saint Theresa D’Avila. The pleasure of Theresa and the “anorexic saints” is one that inebriates the body, “a real lover” that delights in privation and pain.

This formerly sexually pleasure is replaced by one that is seemingly different and apparently non-erotic but in fact is derived from this very source. An exemplary and powerful work is *Transverberazione* by the sculptor Gian Lorenzo Bernini. It is representative of the European Catholic Counter-Reformation that perceived Saint Theresa in complete conflict with masculine ecclesiastic power that sought to dominate and control her religious life. The art critic Tondelli saw the abandonment of a woman reaching orgasm in the work: “Lacan had no doubts (“elle jouit, ça ne fait pas de doute”) and for some time no-one dared have doubts about Lacan. It would be like saying that Bernini (hardly any standard pornographer, but one of the most famous artists of the Post-Trent Roman Church and a zealous reader of Ignazio di Loyola), let a saintly orgasm slip just like this, without paying attention, like a dream or an extra utterance: a marble lapsus. But can we really say that an orgasm and ecstasy is the same thing? On what basis? Have we ever experienced ecstasy? Have we ever experienced an orgasm?” (Tondelli, 2011). The pain-pleasure described by Saint Theresa derives from the cardiac muscle as a spasm, an ineffable sensation that we perceive with orgasm: “One day an unbelievably beautiful angle appeared in front of me. I noticed a long lance in its hands with what seemed to be a flame at the end. This seemed to penetrate me a number of times in the heart, so much that it reached inside me. The pain was so real that I cried out a number of times, however it was so sweet that I could not wish to be free of it. No joy on earth could bring the same contentment. I was left was an immense love for God when the angel withdrew its sword” (Tondelli, 2011).

So it is that pain passes through the nirvanic state to become sexual pleasure. The mystic is the start of a genuine reformulation of metaphysics.

HALLUCINATION AND PENITENCE: THE PHENOMENON OF THE MYSTERIES OF TRAPANI

A day of celebration embraced in mourning

Another fundamental component in the creation of the A/V Agnus Dei project was the research into the musical and iconographic aspect of the Mysteries of Trapani procession. The term Mystery can be defined as “to enclose oneself” or “being entrapped”. It originates in the Mukham sanscript where it was defined as “mouth”, “throat”, “entrance” even if the word mystery is now attributed the meaning of craft. The Good Friday procession of Trapani dates back to the Spanish rule and is a representation of the “Via Crucis” consisting of twenty vare (religious floats), artistically designed by different classes (originally by Maestranze or skilled workers which were abolished in 1821). It originates in the first decades of the 17th Century when the “Compagnia del Preziosissimo Sangue di Cristo” was founded in Trapani.

Two of the most evocative religious floats are the flagellation and the simulacrum that mark the end of the Procession of the Lady of Sorrows (“A Maronna Addulurata” in the Sicilian dialect) and then enter the Church of the Lost Souls of Purgatory. The statue of the Virgin Mary is preceded by a procession of women dressed in black as a sign of mourning that is broken by the light of their ignited candles. Some of these devotees are barefoot and remain so throughout the entire procession that lasts twenty-four hours, they receive nothing in return, offering solely their devotion and their own pain to the Mother of all mothers. Pain and consternation are highlighted in the features of the Lady of Sorrows, the ultimate symbol of the most immense pain; that of seeing your son tortured and nailed to a cross.

The procession is accompanied by funeral march music. The passage of the procession as well as the processions featuring flagellants is announced by percussion instruments. Among its notable musical elements is the Annacata, the rhythm and characteristic gait with which the group proceeds during the procession. The “mystery” is carried on the shoulders of the “massari” (farmers) that seem to adopt forms of movement to lighten their burden and follow the rhythm marked by the notes of the funeral march. In the Sicilian dialect the term “annacata” means to cradle and in this deep love of the Trapani people for the groups it seems that these movements express their desire to cradle their Mysteries.

There has been an evolution in the sound accompaniment in the new century - leading to further changes - with decelerated executions, new funeral march compositions and choirs. On a visual level, there is an immediate conformation to the general rolling movement.

The procession of the mysteries is a very evocative representation and one that is also appreciated by agnostics. The music, the sense of penitence, the fatigue and the dripping sweat of the cart transporters along with the “annacate” and the collective state of hallucination all create a mystical and physical

connection with the other participants who willingly or otherwise abandon themselves to the general embodiment. Their interior state is transformed to something that is exterior and this concealment becomes the procession. Emptiness explodes into fullness, absence becomes real presence, suffering turns into joy, mortification to delight and nothingness evolves into ecstasy and vice-versa.



Image 2. © Floats of the Lady of Sorrows (Unione Maestranze Trapani),
Glitch art by Valeria Di Sabato.

REFLECTIONS ON THE MUTE PULSATION

Death in life

We have seen how sadism and masochism are erotic practices that are based on the subordination of the cannibal instinct through the induction of physical pain and humiliation of the oppressor over the “victim”. Sexuality has an inbuilt element of aggression that is inherent in the desire for physical and mental domination required to overcome the resistance of the sexual object with methods other than seduction.

Algolagnia is in fact a type of paraphilias in which pleasure is induced by suffering and by every form of humiliation and subjugation. The prolongation of sadism directed at a subject takes the place of the sexual object and is derived from the castration complex and guilt that is principally manifested in sexual passivity or masochism. The domination game is fundamental between the sadist and the masochist; the relationship between cruelty and the sexual instinct is the aggressive stimulator of the libido.

All these pulsating impulses are simply aspects of Eros and the sadistic component of the same. The tumult of the life of Eros inevitably leads to that which Freud defined as mute or the death pulsation (Todestrieb). The logic

of pleasure and the ambiguity of pain were discussed in the 18th national congress where Freud explained that psychic life was more than just the quest for pleasure and the avoidance of pain: “Often that which should cause pleasure is experienced in a painful manner, whilst a state of suffering can be transformed into an inexorable source of pleasure” (Psicoanalisi e Sienza, 2016). So the psyche is inclined not to combat pain and ends by retaining it internally.

Apart from being a symptom of neurosis this repetitive compulsion is inherent in the death pulsation often referred to by Freud. The muteness of the death pulsation in the continual return to the same as ordinary unhappiness that according to Freud is hidden in masochism. The quest for the fusion bond with the primary subject in the search for rest/repose of the being is the source of the death propulsion. The words of La Segal in explaining that the death pulsation is an extreme attempt to avoid perceiving the emotions of life, aspiring to the annulment of the same: “We tend to unconsciously repeat the traumatic and painful modes that have marked our life experience and seek to transfer energy towards a subject to return to zero tension” (Psicoanalisi e Sienza, 2016).

THE CATHARSIS OF BDSM

“All art is erotic“

Gustav Klimt

The art of bondage

The desire to be tied up by another is a power game between our unconscious and our most intimate passions. The Japanese art of rope bondage or Shibari, dates back hundreds of years. The first knots date back to the Jomon period in Japan (300 BC). In 1400 one of the eighteen fighting disciplines was known as Hojojutsu or Nawajutsu, namely the art of fighting with ropes. The combatants used this rope as a form of immobilization. The slings were not used solely to tie up the prisoners, they also had to be visually attractive in line with the tenants of Japanese art.

One approaches a form of transcendental state when the body is completely immobilized. A moment in which we can listen to our body and our emotions through the sensation of mental emptiness. The ropes hold not only our body but also our souls still. It is the quest for these ecstatic thrills that permit the complete abandonment of the slave to the master. A game that is based on “abandonment or escape”. The ropes are patterns on the skin and the sensation of envelopment and immobilization allow the mind to leave the body, rejoicing with passion. Only those who have control over themselves can give this to others.

As is the case in meditation and the quest for inner peace, abandonment and prostration to the other lead us to experience the 0 nirvana state cited in the previous chapter about the death pulsation. The redemption of the slave, explored in the Master-Slave dialectic that Hegel’s poor man entrusted to the Phenomenology of Spirit (1807). Here in layman’s terms the German philosopher states that there is a Master that has achieved this position through risking his life and so is elevated above the Servant, who has not fought for his independence because of the fear of dying. The Servant is therefore a worker in

the hands of the Master. It is the very work of the Servant that keeps the Master alive. He cannot do without it and would be doomed without the Servant. In this sense we can see that subordination is reversed. The Master becomes the slave and the Slave becomes the lord. Women who believe that the pleasure they bequeath to their “dominator” really makes them the dominator - because it is from themselves that the man’s pleasure is derived - can be said to reason with the same dialectic.

CONCLUSIONS

*“Ecce Agnus Dei, ecce Qui tollit peccatum mundi”
(Behold, the lamb of God, who taketh away the sins of the world)
John 1:29*

Considerations

Ecstasy, pleasure, the mystical orgasm and abandonment to another are all part of the same quest enacted by our subconscious. The myth of the Lamb of God (Agnus Dei), is nothing more than the justification of cannibalism that is inherent in every human being. The fundamental role of religion has ensured that the death pulsation does not sink into the complete abandonment of the life pulsation leading to violence as an end in itself.

The ritual of animal sacrifice is the tangible example of the evolution of the human spirit and the fact that it is preferable to relieve the cannibal desire through inferior species and suppress homicide. Citing Porfirio: “And if one should claim that god has given us not only the fruits of the earth but also animals for our use, I would say that we do animals an injustice through their slaughter, we steal their souls and so we should not sacrifice them! [...] How can holiness be said to exist when that which is robbed of something belonging to him is nothing more than the victim of an act of injustice?” (“Sacrificio animale”, 2021). We are all equally oppressors and sacrificial lambs. The game of domination and submission represents the history of mankind; the shifting of the balance of narcissism and the complete physical and mystical devotion of erotic practices of bondage alleviate certain psycho-physical disturbances.

Constrictions, limits and errors often open new metaphysical dimensions in which the mind completely dissociates from the body and is gratified by humiliation, regressing to an infantile state in the maternal womb. The achievement of ecstasy through the practice of pain is a process requiring complete faith in the other and like any other erotic act it demands control. The Master must be completely aware of his/her control until the very end.

The human spirit is full of anger and aggression. According to Freud, Christianity and the morality of civilization are the main causes of neurosis. The only way to achieve a balance between good and evil is the simultaneous awareness of one’s dark and light. To achieve this, we can entrust ourselves to these techniques of the expiation of pain, rediscover pleasure and elevate ourselves to a universal state by losing complete control, seeking to re-establish an element of peace in reverberating cosmic suffering.

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Building a Post-Human: Analysis of the Bio-artwork *May the horse live in me*

ABSTRACT

The advances in biotechnology are a critical matter for some artists working with living beings. The life manipulation in bio-art, in some cases, can be executed only one time in a performative way, as the bio-artwork *May the horse live in me*, in which the artist received an injection of horse's blood. Despite the artist's intention on denouncing the consequences of the anthropocentric era, especially for the non-human animals, it was drawn a philosophical and psychological analysis based on the artist's discourse and other materials available about the performance. It was investigated how the hybridization of woman and horse can be understood as the building of a post-human being that challenges the humanistic supremacy view of the Same. Similarly, it was analyzed how the deconstruction of that view allows the expression of other forms of subjectivity. In that sense, it was also considered how the human-animal relations of power play in that performance and how it is dualistic to address the issue of the animal subjectivity.

KEYWORDS Bio-art, humanism, post-humanism, subjectivity, animals.

INTRODUCTION

Bio-art is a conflictual realm for it deals with life manipulation. It can rise confrontative and subversive issues in the theme of life science. The use of biotechnology by the artists addresses philosophical, political and economic issues in a performative way that builds a dialectic between the real presence of the living being and the metaphorical representation of the process exhibited. (Hauser, 2008). In that way, bio-art can be comparable to performance art. Some bio-artworks are indeed focused on the experience of the viewer, which, in the words of the curator and bio-art researcher Jens Hauser, “switch back and forth between the realm of art and the real-life”. (*Ibidem*, 2008).

In another view, as the artist and scholar Beatriz da Costa (2008) states, some reactions to bio-art are the celebration of the advances in techno sciences. The artists, according to Costa (2008), change their atelier for the laboratory, but not for personal reasons, such as to discover who they are or to portrait the world in a subjectivity way of view. Bio-artists deal with experts and develop/create new perspectives, which could have high economic value (*Ibidem*, 2008).

That positivist point of view can be shared in the analysis of the bio-artwork *May the horse live in me*, by the *Art Orienté Objet* (AOO, Marion Laval-Jeantet and Benoit Mangin). In a Hauser approach, this artwork can be understood as a performance, in which Marion received an injection with the horse’s blood. The high scientific content of this project, which encompassed previous months of research and preparation in Biolabs to allow the human body to have blood from another species¹, could lead, then, to understand this artwork as the perform of a scientific experiment in front of an audience. According to that point of view, bio-art can be interpreted as the use of biotechnology in a way that authenticates the search for developments in the biomedical area.

Understood as a performance that encompasses the living beings (woman and horse) *May the horse live in me* uses biotechnological apparatuses and techniques as the main core of a project whose initial intention was to use the blood of an endangers animal, such as a panda. The artists were thinking of different ways in which they could “save” or “restore” these animals. The focus was on challenging the technological developments in a poetic way that shed light to Anthropocentric issues, such as the loss of biodiversity. In the interview, Marion expressed her defiant tone by stating that she was doing it to warn people about the dangerous nature of biotechnologies and to point her view of a failed world engineered by the advances in technology (Ars Electronica, 2011).

The artist declaration opens for the analysis of this artwork as a critic for the humanism and its theory. Based on the standard of the universalization of humanity, what the humanism value as the human is the white man from Europe (Braidotti, 2013). Its opposition encompasses everything this human is not. The Other, as it is called, justified uncountable aggression, violence, and domination over the social minorities such as women and non-white people (*Ibidem*, 2013).

1 The artist already knew an unsuccessful case of injection of animal’s blood without any prior preparation in a person that led to anaphylactic shock (Laval-Jeantet, 2011).

In that sense, it is proposed an analysis of the performance as the creation of a hybrid being, this woman-horse that can be understood as an alternative to questioning the humanistic logic of white male supremacy. A change for this vision encompasses many aspects, as the search for a new understanding of the animal's subjectivity and feminist considerations. It also touches the issues of animal and human psyche regarding their interaction and communication.

Living in the Anthropocentric, and specifically because of that, it is necessary to allow the existence of the others without using their differences as a reductive way that justifies its exploitation. In that sense, this artwork, despite using the material of a non-endangered species, attain to propose new thoughts towards animals' liberation in society, even if it is by criticizing the AOO's approach towards the horse.

The Humanism and Post-Humanism Subjectivity

The Eurocentric humanism, according to the philosopher Rosi Braidotti (2013), is built above the binary logic of the Same and the Other, in a way that, what is different is seen in a pejorative gaze. While the Same encompasses the identity of "universal rationality and self-regulating ethical behavior" (*Ibidem*, 2013), the Otherness is the inferiority part left behind. These are the sexualized, racialized, and naturalized bodies that were seen in European history as the disqualified, lethal and disposable (*Ibidem*, 2013). As the philosopher explains later, sexualized encompasses the women, racialized the natives from non-Western countries and the naturalized includes the animals and the ecosystems. (*Ibidem*, 2013).

The feminist practice and theory might use the equality ideas of humanism, which celebrates the rationality and self-awareness of the humans, but raise several critiques to the masculinity universalism presents even on the revolutionary Left (*Ibidem*, 2013). The philosopher adds that European secularism assigned features to women as unreasonable, passionate, and emotional beings, reinforcing their exclusion on political affairs (*Ibidem*, 2013). This example depicts a relation between women and animals: both categories have been left behind in the humanistic equality and they are secularly seen as lacking rationality.

Based on the humanist restricted and prejudiced view of what counts as human, or even as a living being, the post-humanism could rise as its alternative. In Braidotti's (2013) approach, post-human follows the idea of the decline of humanism without falling in the empty discourse of the death of the Man. Instead, it seeks new ways of thinking the human subjectivity. Other versions and visions of the self are created. Post-humans are marked by the raise of the "Others", that minorities neglected by humanism. According to Cary Wolfe (2009), the post-humanism is not simply about the triumph of the unwatched, but a humility recognition and responsible vigilance of all the living beings in the world (Wolfe, 2009). It is a multitude of discourses not categorized only in

women, animal and natives (Braidotti, 2013). It is important to discuss these other types of humans' subjects, in order to address "norms and values, forms of community bonding and social belonging as well as questions of political governance." (*Ibidem*, 2013).

Animal Subjectivity

The researcher Matthew Chrulew (2017), reading Foucault, states that the discourses and practices of animal psychology, ethology, biology, and related fields have an Anthropocentric view as they are more focused on how to define the human based on the non-human animals. Yet, one may argue that the Anthropocentric approach is really the basis of any analysis as they are done by humans. However, the question is, can it be done differently, in a way that does not simply redefine human power over the non-human animals?

It is important to read Foucault's biopower including animals as biopolitical subjects. Not only "concerned with the animalization or neologization of human politics", as Chrulew (2017) adds, but mainly about the animal life itself. Since Enlightenment, animals are defined as inferior beings than humans based on presumptions such as the lack of a universal system of communication and lack of reason and logic (Bradshaw & Watkins, 2006). Nowadays, that inferiority logic is applied to transform animals in common commodities in the machine of the global economy of advanced capitalism. Animals, then, are largely used in biotechnological researches in drugs, cosmetics, agriculture, biomaterials, aimed at the enhancement of humans (*Ibidem*, 2006). Submitted to these regimes in the biopower apparatuses, animal subjectivity needs to be questioned in order to analyze the relations of power between human and non-human animals.

The philosopher Dominique Lestel (2014) stands for animal subjectivity stating that, in comparison with machines, the animals respond intentionally, hence, they are subjects and not objects. The philosopher adds, however, that the animals are not subjects in the same way humans are, even though they are able to develop particularities when in contact with humans and different environments. The death of the Man, promulgated by Foucault and Nietzsche, according to Lestel (2014), must be taken as the opening for the proliferation of other subjects. The reminding of humanity's finitude among other living beings opens for social and legal recognition of animal subjects (*Ibidem*, 2014).

Animal subjectivity, however, must not be taken as the recognition of animals' behavior and mind knowledge in a way that allows a stronger human intervention upon them, transforming and dominating the animals more effectively and intensively. If conceptualized and practiced in that way, animal subjectivity only reaffirms the Cartesian view over animals as machines. It is necessary to acknowledge the biopower relations of subjection of the animals in experimental subjects even for phenomenological and zoo semiotics studies (Chrulew, 2017).

In the psychology realm, liberations' work of the marginalized ones has included non-human animals. Bradshaw & Watkins (2006) are working with trans-species psychology focused on understanding the interpenetration of the domains on human and animal language and psyche. Animal liberation through acknowledging individuals' psyche is a path towards building animal subjectivity.

Bradshaw & Watkins (2006) state that, psychological human differentiation based on speciesism ignores the animals' individuality and represents them as colonized beings, symbols or physical objects. What Bradshaw & Watkins (2006) propose, then, is not the erase of species differentiation, but to release psyche as a human privilege. Different species, then, would be seen as diverse psychological beings. "By recognizing the animal's subjectivity, psychology ceases to be solely a human enterprise and animals enter the sphere of psychological concern." (*Ibidem*, 2006). Besides that, what the authors claim is the building of a new episteme which encompasses trans-species psychology, and, therefore, de-privileged language as a human tool. The aim is to allow trans-species exchanges in diverse modalities such as "wordless unconscious, smell, touch, sight, taste, other types of vocalization." (*Ibidem*, 2006). In other words, to bring these marginalized communication modalities back to the psyche exchange between species.

MAY THE HORSE LIVE IN ME

The desire expressed in this title is the name of a performance that took place at the Kapelica Gallery in Ljubljana, Slovenia, on 22nd February of 2011, in which Marion Laval-Jeantet received a shot of a horse's immunoglobulins serum. The performance was a final presentation of several months of research and preparation in Biolabs that made it possible for the artist to be injected with part of a horse's blood (Laval-Jeantet, 2011).

The AOO group initial idea of using the blood of an endangered animal, panda, had to be adapted. The laboratory Marion had contact conducted researches in the blood of farm animals: cow, sheep, pig, and horse. In the words of Marion, the last one was chosen based on the hybridization fantasies (Centaurus, image 1) and the horse gait (Laval-Jeantet, 2011). The performance won the Golden Nica prize in the category of hybrid art. (Ars Electronica, 2011).

Before the *in vivo* experiments, the human and horse cells were put together *in vitro* which resulted in the dead of both cells. The next step in the biological approach was the identification and isolation of parts of the blood that causes major harms and the administration in Marion by isolated immunoglobulins, followed by combined families of immunoglobulins (*Ibidem*, 2011). This medical path was necessary to make her available to receive forty families of immunoglobulins on the day of the performance (*Ibidem*, 2011).



Image 1. Centaurus, from the Göttweig Abbey Collection. Phainomena des Aratos. Image source (GSSG.at | Start, n.d.)

The performance begins with Benoit preparing the material to apply in Marion, who lies on a hospital bed. The audience watches with sepulchral silence the plasma injection of tree syringes on her right arm that follows by videos of drawings on Marion's body on a screen showing the schematic way of the horse's blood on her system (*Ibidem*, 2011). Marion states that a decisive factor to perform at Kapelica's was the availability of health rescues assisting it. Even though she has prepared her body to receive the non-human blood, it would be the first time she was taking a huge amount of horse cells in one shot (Ars Electronics, 2011).

Ten minutes after digesting this first part, a horse enters the scene. It's Viny accompanied by ethologist Sabine Rouas, Marion's friend. She helped the artist to get used to the animal ten days before the performance. On the stage, Marion executes various approaches to get close to Viny and Benoit helps her to put on wearable horse's legs. They were designed to give Marion eye contact with the horse. With the help of Sabine and Benoit, Marion, leaning on Viny's back, make two rounds of walking on the stage. This was the "ritual of communication" (image 2) (Timurgalieva, 2018).



Image 2. Ritual communication at the performance *May the horse live in me*.
Image source ((artorienteobjet, 2011)

Twenty minutes after the injection, Marion is already off her stilt shoes and back to the hospital bed. According to the artist, that's the moment that her body is responding to the horse's cells (Laval-Jeantet, 2011). Later, she reported having a fever. A nurse came and took fifteen ampoules of her blood, which Benoit proceeded with lyophilization². The high fever caused by the inflammatory process expressed on the almost instantly coagulation of the blood before the dehydration of the samples (Timurgalieva, 2018).

In the end of the performance the artistic duo displays for the audience both samples: the lyophilized blood and those that were not through this process (*Ibidem*, 2018). An emergency doctor measures Marion's blood pressure and they exchange contact for safety reasons (Laval-Jeantet, 2011). The performance is over. At least this part. In the days after the performance, Marion reports expressions such as fear, lack of appetite, sleep problems, higher nervous state, omnipresence, as a result both from the inflammatory process and the horse's effects *per si* on her body (*Ibidem*, 2011).

² An organic conservation process that removes water by freezing the material under vacuum. (Office of Regulatory Affairs, 2014).

METHODOLOGY

The bio-artwork *May the horse live in me* and Marion's discourse were analyzed from the philosophical and psychological point of view that combined the theories of humanism, post-humanism, animal subjectivity, encompassing feminism and Foucauldian relations of power.

The first material analyzed were videos that depicted the performance (Fundación Telefónica, 2012). There is no available online video of the entire performance, which lasts around 90 minutes (Laval-Jeantet, 2011). The only way to get access to all parts of the performance is with articles about it, especially the one very poetic wrote by Marion.

To complement the examination, Marion was interviewed by this author. It was also important to know Marion's background in bio-art and the artist views on diverse topics, such as feminism and humanism. It must be acknowledged that the artist didn't change her discourse about the ideas that motivated the AOO duo in the execution of this artwork.

The discourse of the artist attaches her view and concepts on the artwork, in which the lack of the entire performance recorded might difficult the process of analyzing this piece by a viewer who was not at Kapelica. The artist discourse affects the performance reception in both ways in which the artist's speech is more criticized than the artwork *per se*, and, in the way that, people who were not present at that moment will respond to this art experiment differently.

The artist's speech, then, is the object of an initial analysis, but it is also proposed a new view above her work with Benoit. The analysis encompasses the artist's initial intention in this performance from the point of view of how should animal subjectivity be approached by the psychoanalysis to provide more discussion about the relations between humans and non-human animals. The artist's discourse also opens the interpretation for this artwork as the building of a being that is more than human, that, could be analyzed as the post-human combination of two Others (woman and animal) in a way that overcome humanism and its discourses.

THE RISE OF THE POST-HUMAN

The assumptions Marion takes about herself and about literally becoming more than human are very polemic and a good point of start on the examination of this artwork. Laval-Jeantet (2011) documents a conversation with the Professor Jean-Claude Lecron, in which he explains that the immunoglobulins are very specific cells that need receptors, specifics from each living being. In this way, a horse immunoglobulin, received by a horse leads to equine results, but received by human cells could lead to disproportional expressions in a human body (*Ibidem*, 2011). The artist adds that her appetite, sleeping hours, nervous state and fear, the peculiar way she was feeling in the days after the injection, were possible results from that. (*Ibidem*, 2011). What is important to analyze in Laval-

Jeantet's discourse is that she was not feeling like human or even a primate, but neither has she claimed to become a horse. What has she become then?

In a linguistic analysis, the artist's understanding of herself could have been a poetic one. The idea that her body's change affected her conscience and, therefore, her subjectivity, or, in other words, the person whom she calls "I", could be the result of language construction. According to Piotr Zowojcki (2014), our identities are built in the contact with other bodies, with the culture, the social system and the technology. The author also states that the mind is not what defines a human being, for it encompasses a highly debatable nature (*Ibidem*, 2014). In that case, if the construct of the "I", is more than a process of thinking, but a process of feeling, perceiving, and, experiencing the world (*Ibidem*, 2014). In that sense, Marion's subjectivity could be changed after visceral contact with another animal.

This phenomenological approach is also shared by Wolfe. In his readings over Varella & Maturana's works, the philosopher states that the neurophysiological process of self-production, self-making, is recursive in a way that the output is the input. In that sense, the self constantly reproduces the elements that produce it (Wolfe, 2009). According to that view, it is reasonable to argue that the physical way the artist was feeling after the injection contributed for the process of Marion's self-perception. The construction of her subjectivity as something not human neither horse could also have affected her body in a constantly refeeding process.

From the philosophical approach of humanism, it was seen that both woman and horse are taken as the Other, and that both play a different, but still, the same role as unreasonable beings. In her interview, Marion states that the Other is the Man, originated from the feminine X chromosome, which lost one its leg and transformed into the masculine Y chromosome (Laval-Jeantet, 2019). Despite her optimistic view, the union of two Others could lead not the to the Same, but to something else, something which can be interpreted as post-human.

The union of the two Others can be seen as emancipation from the master-slaver relations of the humanism. However, in another gaze, when using the animal material to insert into a human (even though it is a woman) the historical relations of human mastery over horses are reinforced. Besides that, this performance can draw attention to other contemporary issues as the use of animals to biotechnological researches that aims the human enhancement with no benefit for the animals. This is one more of the many aspects of this performance that at the end, highlights the Anthropocentric era we are living. However, it is precisely the Anthropocentric approach that must be questioned in all of the areas of the knowledge.

The power acquired by the *Anthropos* over the rest the nature is dissociated when the performance is analyzed from the point of becoming an animal. As Braidotti (2013) states, this displacement and the recognition of a trans-species solidarity could be the basis of an environmentally symbiosis merge with other species, in a Margullis' approach. According to that point of view, the relations

between humans and non-human animals need to move towards other ways that dismisses them as barely props for human needs. (*Ibidem*, 2013). The use of animals in biomedical apparatuses, such as xenotransplants³, which was performed in *May the horse live in me*, can be understood as an affirmation to the treatment of animals as disposable bodies. Especially, in this case, the blood from a farming animal, as Marion states in her article (Laval-Jeantet, 2011) and interview (Ars Electronica, 2011), has potential to be used to treat people with immunoglobulins' diseases, emphasizing the Anthropocentric exploitation over animals. Horse, chicken and other farm animals are already inscribed in this global market as they are used in the process of the vaccines and serum production (Laval-Jeantet, 2011).

In a post-anthropocentric and post-humanist approach, it is necessary to rethink the role humans have attributed to the other species and how they have related with them. If, as Donna Haraway (2003) states, the oncomouse (hybrid being with human and non-human combined material) was the first post-human created, Marion with the horse's blood can also be considered a post-human. Even though in both cases (the mouse and Marion), the instrumentalization of the living by the biotechnological apparatuses for economic purposes are still present (as commented above), the mixing of human with non-human animals is a heretic approach in the anthropocentric view (Braidotti, 2013). Marion, then, by receiving the horse's blood, becomes something in between, the becoming-animal, the chimera⁴. That is the power of this performance, to redefine ways of the human-animal continuum.

Human-nonhuman animals' chimeras are seen as an abomination since it populated the imagination of the ancient Greeks. Following that idea, the uncanny of this bio-art performance probably relies in something Robert & Baylis (2014) called the "yuck factor", a common response in the audience that watched the interspecies creation from non-human material to human. The authors explain that mixing species evokes the idea of bestiality: "an act widely regarded as a moral abomination because of its degrading character" (Robert & Baylis, p. 145). It encompasses two main reasons that are directly against our good costumes as human society, thus, provokes repulsion. First, the idea of sexual relations between human and non-human, which is also prohibited by law. The second is about the identity of the conceived being, which is neither human nor nonhuman. In both cases, it is seen as a monster. (Robert & Baylis, 2014).

The Chimera, however, blurs the set boundaries between human and other creatures (Andrieu, 20117). Embedding the Other in an Other's body also cohobates the vision against the speciesism, for the feminine and the animal

3 Xenotransplants are created by inserting or grafting nonhuman cellular material to human embryos, fetuses, or adults, (Robert & Baylis, 2014) such as pigskin to recover burns.

4 Fabulous monsters, human body recombined with various animals' parts, such as wings, serpents, and boar tusks. (Andrieu, 2007).

are entangled. The oppression over women and animals by male domination is the support of the sexists and racists theories of speciesism. (Braidotti, 2013).

The fact that a woman received the horse's blood highlights other aspect of the feminist post-humanism. In the same, way the women are structurally in the service of humankind as the one that biologically generates, carries and gives birth, so are the animals engineered to provide organs and cells to heal the humans (Braidotti, 2013). Put in another way, it is the women's bodies which are the givers for the continuity of the human species, as the animals used for xenotransplants. Both women and animals, in that sense, have their bodies integrities violated. The use of Marion's body instead of Benoit's in this performance, is central to reach the issues of intimacy, intrusion, and to show the differences between of the categories of the Same and the Other.

Humanism and other theorists claim that, the ability of self-concern, of building a language and a narrative history make humans better than animals (Bradshaw & Watkins, 2006). Communication interspecies, then, is a key feature to the post-human subject (Braidotti, 2013). In that sense, it is possible to stats that, the walking ritual on the stage that Marion performs in stilts with Viny demonstrates new ways of communication between human and horse. In a psychoanalysis based on the propositions of Bradshaw & Watkins (2006), affection and communication are aspects that also blur the species boundaries, contradicting traditional Anthropocentric thoughts. The human in that case, walks toward an ecologic merge into the environment, against colonial agendas that put nature in the service of the human.

Chrulew (2017), in the other hand, states that processes of communicating with animals "as sentient and responsive beings", as the AOO group performs, only accentuates the relations of human power over them. The scholar adds that in some factory farms, high productivity is achieved, in a Temple Grandin's way, when the animals are proper treated according to their personalities, emotional states and behaviors (*Ibidem*, 2017). The point here, however, is not to defend that animals in farms should be treated with violence and brutality, but, rather, to draw attention for the fact that, the novelty way of performing with the horse (a farm animal) in stilts, can also be interpreted as a new mode of subjectification of this type of animal. In this effort to replicate with a human a natural way of horse communication in the same eye high can help not to elucidate horses' comportments, but to generate new interspecies relations. In this way, the horse in this performance can be seen as an experiencing subject.

However, not all is lost. As Chrulew (2017) states, animal subjectivity is just one way of problematize the way humans relate with animals. Besides that, the interaction Marion had with Viny also changed the artist. Not only by the fact she received the immunoglobulins' shot, and, in her words (Laval-Jeantet, 2011) it changed the way she understands fear, but mainly, by the way the artist communicated with the horse during the performance. It has shown negotiations in the relations of power: the human was the one that had to hear props to "ride" the horse.

Finally, another critical point must be addressed about the communication ritual. In a Foucauldian approach, even though each area of knowledge has its normative procedures and statements, when it comes to animal science, the labs can be comparable a to circus and the zoos to theatres (Chrulew, 2017). *May the horse live in me* does nothing better to change that scenario. The displaying of the animal walking on the stage remembers the ones of the circuses, but in a more explicit way: in an art exhibition.

CONCLUSIONS

May the horse live in me is a very controversial performance. Critics from the power relations between human and horse can be drawn from the ethical problems of performing with an animal strongly used in human history to military, feeding and farming purposes. In another view, this performance aims to build a post-human by hybridizing human and non-human animal, which can open for the proposition of a world in which all forms of life are respected. In this core are the feminist and post-colonial discussions to overcome the standard Other of the humanism.

When becoming a non-human animal in this performance, Marion's subjectivity changed to encompass, in her words, but also in a post-humanistic analysis, others Other. The use of biotechnology in that context must not be understood as the celebration of the techniques that allow the human body to receive non-human animal blood, which endorses the Anthropocentric and humanist vision of the man in control and dominance of the nature. Rather, it uses technology to connect humans and animals, it proposes humans and animals as a continuum, as an integration, as another way of thinking the responsibility with the creatures of the planet.

Aligned with that vision, the performance also implies the acknowledge of an animal subjectivity, even if it is by its "negative" side. The discussion about how this performance approaches human-animal communication and, therefore, the agency given to the horse is dualistic. It can be seen as the reinforcement of the animal's subjugation or the recognition of their psyche.

To end, it is necessary to critically analyze today's world. In that perspective, it is important to acknowledge that, bio-artworks such as this one, ask for different Anthropocentric approaches. Who are the others that will come after the death of the Man?

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Touching the Posthuman

ABSTRACT

My current research and art practice investigates ‘abject bodies’, the way we experience our bodies physically and metaphorically. I’m particularly interested in skin, our largest organ that’s also the most prominent. It’s our boundary that contains ‘us’. Our biggest sensor that allows us to feel and to touch. And it also protects. Skin has many different meanings and functions, especially when it comes to new scientific discoveries like “Knitted skin cells” and “Ticklish Phones”. In this paper I will investigate the act of touch, its absence, and the sensor of touch, skin, through the observation of different sculptural artworks by artists such as Ivana Bašić, Studio ThinkingHand who’s artworks feature skin-like elements.

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KEYWORDS Posthumanism, Skin, Abjection, Touch, Sculpture, Surrealism.

TOUCHING THE POSTHUMAN

The sense of touch is an almost unrecognised experience through the mechanical operation of everyday life, however, it is our first sense that's no less essential than any other. The layered experience of touching is enacted through skin, our fascinating biggest organ that has strong cultural, psychological and political indications; it is far from the ordinary. On the basis of Claudia Benthien's study on skin (2002), I'm interested in exploring 'abject bodies' in fine art, the way humanity experiences bodies physically and metaphorically. Based on the cultural history of skin, it's been both perceived as a (protective) boundary and a separating agent that helps in the formation of the individual self, thus being "an organic and imaginary reality" (Benthien, 2002: 8). The perception of skin has gone through many different layers of meaning through history, and new scientific, medical and psychological explorations further enriched its implications.

At the same time, I'm interested in the way this everyday sense, touching, became a source of contamination and disease during the Coronavirus pandemic and shifted from the physical realm. How we banned ourselves from touching, how we rely upon medical gloves as 'second skin', how we can experience a 'virtual touch', and the phenomena of "Skin hunger".

Through the observation of different sculptural artworks by artists such as Ivana Bašić and Studio ThinkingHand who both recreate bodily textures. By making a connection between different materials that aim to reinforce the feeling of human skin, I intend to investigate the current status of how we experience our bodies within the posthumanist discourse, enacted by fine art practice.

BOUNDARIES

The perception of our skin is that of a container - our self is held within its boundaries; it is a part of our identity. What happens, when art imitates this shell, moreover, when this boundary begins to leak? To begin with, I'll be taking a look at previous cultural perceptions on skin, that went through many different layers. Skin is our largest organ that is responsible for our first sense to develop as early as at the embryonic stage, touch. Skin is "the most important organ of communication and contact" (Benthien, 2002: 7), that shapes our understanding of ourselves and the outside. It helps form our identity, as well as influence our perception by others, as "[s]kin [is] the manifest place of the other that is accessible to sight and touch" (Benthien, 2002: 12).

The perception of skin has gone through quite a transformation. Benthien describes different aspects: from a semiotic perception, skin is talked about as an enclosure, a "sheltering cover" (Benthien, 2002: 17) that can also conceal or deceive. In a slightly different angle, skin has also been equated to person, body, self or even spirit or life (Benthien, 2002: 13) Either way, skin is perceived as Silvia Federici (2009) points out, both a source of identity and a prison (Federici, 2009: 16). Before the second half of the 18th century's modern approach to the body, "[t]he skin was understood as a porous layer with a multitude of possible openings. (...) Here, the surface of the body is a place of permeability and

mysterious metamorphoses” (Benthien, 2002: 39). Another interesting point to make in regards to 16th-century anatomical illustrations that depict the skin of the *écorché*¹ as undressing, ‘voluntary and liberating peeling’ (Benthien, 2002: 68) layers, ‘loose cloth’ (Benthien, 2002: 78). Thus instead of a strict boundary, according to Barbara Duden, the skin was a “surface on which the inside revealed itself.” (Benthien, 2002: 40)



Image 1. *Frontispiece Thomas Bartholin, Anatomia Reformata (1651)* © Wikipedia Commons.



Image 2. *Écorché in Historia de la composicion del cuerpo humano* By Juan de Valverde de Hamusco (1556) © Wikipedia Commons.

THE DISINTEGRATING BODY

This way, disease, especially one that visibly manifested on the skin, was understood as a process triggered in the individual themselves (Benthien, 2002: 42). Medical practices perceived skin as a “therapeutic organ” (Benthien, 2002: 40), through which disease could be treated by various ointments and punctures (Benthien, 2002: 40-41). After the 19th century’s discovery of germs, the understanding of the real causes of disease became widespread, initiating

¹ “An anatomical illustration or manikin showing the muscles and bones that are visible with the skin removed.” Merriam-Webster. (n.d.). *écorché*. In Merriam-Webster.com medical dictionary. Retrieved March 28, 2021, from <https://www.merriam-webster.com/medical/%C3%A9corch%C3%A9>

the necessary hygienic processes. Thus the “cleansing of the body with water and soap ‘created spatial and protective zones between the subject and his own body and the bodies of others’” (Barthel 1989: 144, as cited in Benthien, 2002: 43). The understanding and control of disease and dirt saw the perception of bodies and their relations change, not only when distinguishing between *my* body and the *other’s* body, but within one’s own.

Ivana Bašić’s sculptures echo this issue with ‘leaking bodies’. Her sculptural practice depicts anthropomorphic figures that, according to the artist, “describ[es] what it’s like to be inside a body” (Weiss, 2017). With the words of Stephanie Hessler, “[t]he amorphous bodies recurring in her sculptures are fleshlike, as if on the verge of losing their corporal shape” (Hessler, 2019: 87). What kind of meaning do these pieces give to previous ideas of skin?

As Bašić’s sculptures are always on the verge of disintegration, her “sculptural torsos call to mind philosopher and psychoanalyst Julia Kristeva’s understanding of the ‘abject’. Both a feeling and concept, the abject is a human reaction to the breakdown of meaning, of distinction between subject and object, and of discernment between self and other” (Hessler, 2019: 87). The most common occurrences that create abjection are bodily fluids like urine, menstrual blood, sperm; parts of our bodies that transgress “civilised” concepts of what bodies and body parts are “acceptable”, or as Kristeva writes, “[t]he abject confronts us (...) with those fragile states where man strays on the territories of *animal*” (Kristeva, 1982: 12-13).

As Bašić states, “the body in society is controlled. Even hygiene is a way of control over the body. So whenever the body starts to come to the surface, it is very disturbing for people, because the body is not supposed to overpower the man” (Weiss, 2017). The curiosity of Ivana Bašić’s sculptures come from the fact that they are supremely abject, but it is this quality the artist utilises to create “an attempt to escape the body, escape the matter, [and to] escape the finity of it” (Bašić’ in Weiss, 2017). It embraces the leaking body without letting in touch.

‘UNCANNY INTIMACY’

With different material transformations, the collaborative duo, Studio ThinkingHand approaches the life and death continuum in a different way, whose work remains more within the realm of physical touch. In their work called ‘Vita. Necro.Vita’ (2019-2020) the artists utilise microbial cellulose to create human flesh-like materials from organic matter, that they also incorporate within a performance, almost as a collaborator. The material is allowed to be touched, juxtaposing human flesh with its uncanny other that could almost be made of the same thing. As Margherita Pevere observes, these works created with such a material are both repulsive and inviting. “There is an inherent ambiguity in the materiality of microbial cellulose. Its resemblance to flesh may trigger abjection, or, conversely, uncanny intimacy” (Pevere, 2019).



Image 3. Stay inside or perish , 2016. Wax, glass, pressure, oil paint, weight, rigidity, stainless steel, leather, elastic band. Photography © Damian Griffiths and Annka Kultys Gallery, London. Courtesy and © Ivana Bašić.

This uncanny intimacy describes today, when we live in almost unprecedented times during the Coronavirus pandemic, such experience transformed our perception of skin and touch in rather opposing way. Similarly to the tactophobia of the seventeenth century's Black Plague epidemic (Classen, 2012) we are once again experiencing wariness around touch. That is, a certain kind of touch, the touch of the other that is perceived as a possible contaminator. As illustrated by Manuela Benaim's piece, 'Longing' (2020), where the substituting prosthetic hands allow a performative touch.

At the same time, the first lockdown (that began at the end of March 2020 in the UK), a new phenomenon surfaced, known as the 'Skin hunger' that points towards the necessity of touch, and its counter-productive absence. Skin Hunger is "the biological need for human touch." (Kale, 2020) which has great benefits to the immune system by reducing cortisol that kills the "type of white blood cell that attacks viruses for us" (Kale, 2020).



Image 4. Vita.Necro.Vita series and performances by Studio ThinkingHand Symbiotic Culture of Bacteria and Yeast, iron, water, glass Kvit gallery and Munkeruphus, Denmark 2019-2020
© Studio ThinkingHand

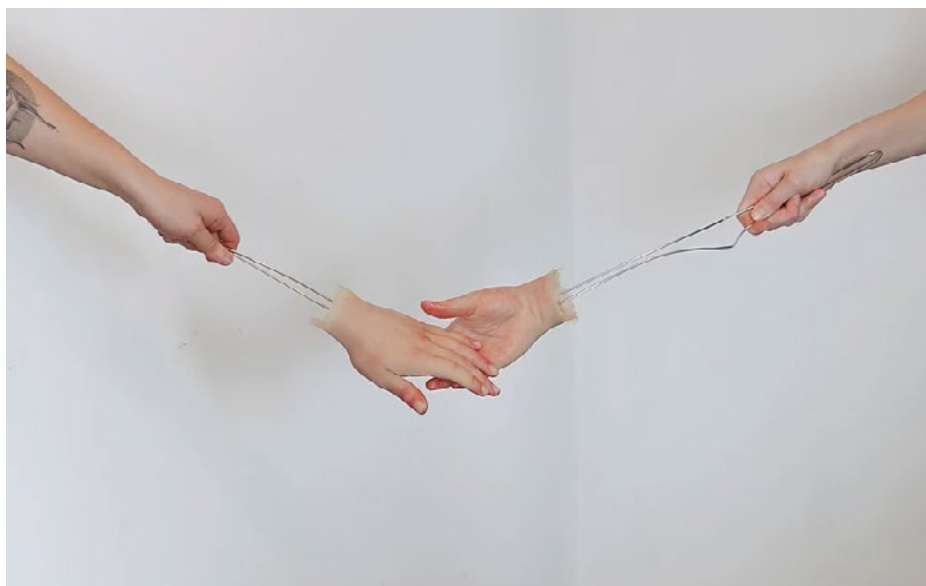


Image 5. *Longing*. Silicone, manipulated metal hanger. 6 March 2020 © Manuela Benaim.



Image 6. *Public Skin*. 2016. © Marie Munk.

As we have seen, skin has been the scene of transformation over human development, psyche and medicine. Yet despite the fact that life has gained a new territory within the virtual world, as Alberto Gallace neuroscientist points out, “[t]here are systems that reproduce similar forces [to touch], but they are not widespread, and the quality of the sensation produced is low. So far, there is nothing that allows us to reproduce a caress” (Kale, 2020).

Perhaps this is where ‘artificial touch’ comes in as illustrated by Marie Munk’s 2016 piece, ‘Public Skin’ that “investigates the transformational consequences of the disappearance of human physical interaction in mixed reality through artificially simulating intimacy.” And even when one has access to more than an imitation of familiar human skin, touch is, unfortunately, a mere illusion. According to Karen Barad, “[t]he reason the desk feels solid, or the cat’s coat feels soft, or we can (even) hold coffee cups and one another’s hands, is an effect of electromagnetic repulsion. All we really ever feel is the electromagnetic force, not the other whose touch we seek” (Barad, 2015: 3).

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Mindless Futurism – AI and Social Justice

ABSTRACT

In order to lay the foundations for a discussion around the argument that the adoption of artificial intelligence (AI) technologies benefits the powerful few, focusing on their own existential concerns, the paper will narrow down the analysis of the argument to social justice and jurisprudence (i.e. the philosophy of law), considering also the historical context. The paper explores the notion of humanised artificial intelligence in order to discuss potential challenges society might face in the future. The paper does not discuss current forms and applications of artificial intelligence, as, so far, there is no AI technology, which is self-conscious and self-aware, being able to deal with emotional and social intelligence. It is a discussion around AI as a speculative hypothetical entity. One could ask, if such a speculative self-conscious system were created at what point could one talk of personhood? And what criteria could there be in order to say an AI system was capable of committing AI crimes? The paper will propose an alternative, some might say practically unattainable, approach to the current legal system by looking into restorative justice for AI crimes, and how the ethics of care, through social contracts, could be applied to AI technologies.

KEYWORDS Ethics of Care, Artificial Intelligence, Social Justice, Restorative Justice, Personhood, Advanced Jurisprudence.

MINDLESS FUTURISM

In order to lay the foundations for a discussion around the argument that the adoption of artificial intelligence (AI) technologies benefits the powerful few (Chaslot, 2016), focussing on their own existential concerns (Busby, 2018; Sample, 2018a), this paper focuses the analysis on social justice (i.e. restorative justice). This paper signifies an edited version of Hadzi's contribution to Restorative Justice in Artificial Intelligence Crimes (Hadzi & Roio, 2019), as presented during TTT and ISEA conferences, exploring the notion of humanised artificial intelligence (Kaplan & Haenlein, 2019; Legg & Hutter, 2007) in order to discuss potential challenges society might face in the future.

The paper does not discuss current forms and applications of artificial intelligence, as, so far, there is no AI technology, which is self-conscious and self-aware, being able to deal with emotional and social intelligence (Bostrom, 2014). It is a discussion around AI as a speculative hypothetical entity. One could then ask, if such a speculative self-conscious hardware/software system were created, at what point could one talk of personhood? And what criteria could there be in order to say an AI system was capable of committing AI crimes?

Concerning what constitutes AI crimes the paper uses the criteria given in Thomas King et al.'s paper Artificial Intelligence Crime: An Interdisciplinary Analysis of Foreseeable Threats and Solutions (King et al., 2018), where King et al. coin the term "AI crime". One can discuss the construction of the legal system through the lens of political involvement of what one may want to consider to be 'powerful elites' (Crook 2010). In doing so one can demonstrate that it is difficult to prove that the adoption of AI technologies is undertaken in a way, which mainly serves a powerful class in society. Nevertheless, analysing the culture around AI technologies with regard to the nature of law with a philosophical and sociological focus enables one to demonstrate a utilitarian and authoritarian trend in the adoption of AI technologies. Mason argues that "virtue ethics is the only ethics fit for the task of imposing collective human control on thinking machines" (Mason, 2019) and AI. One can apply virtue ethics to the discourse around artificial intelligence and ethics.

As expert in AI safety Steve Omonhundo believes that AI entities are "likely to behave in antisocial and harmful ways unless they are very carefully designed" (Omohundo, 2014) It is through virtue ethics that this paper will propose for such a design to be centred around restorative justice in order to take control over AI and thinking machines, following Mason's radical defense of the human and his critique of current thoughts within trans- and post-humanism as a submission to machine logic.

The paper will conclude by proposing an alternative practically unattainable, approach to the current legal system by looking into restorative justice for AI crimes (Poole, 2018; Roio, 2018; Smith, 2018) and how the ethics of care could be applied to AI technologies. In conclusion the paper will discuss affect (Cadwalladr, 2018) and humanised artificial intelligence with regards to the emotion of shame, when dealing with AI crimes. This paper aims at re-centralizing AI ethics through social justice, with focus on restorative justice,

allowing for an advanced jurisprudence, where human and machine can work in symbiosis on reaching virtue ethics, rather than being in conflict with each other.

THE DISCIPLINARY POWER OF ARTIFICIAL INTELLIGENCE

In order to discuss AI in relation to personhood this paper follows the descriptive psychology method (Ossorio, 2013) of the paradigm case formulation (Jeffrey, 1990) developed by Peter Ossorio (1995). Similar to how some animal rights activists call for certain animals to be recognised as non-human persons (Midgley, 2010), this paper speculates on the notion of AI as a non-human person being able to reflect on ethical concerns (Bergner, 2010; Laungani, 2002). Here Wynn Schwartz argues that “it is reasonable to include non-humans as persons and to have legitimate grounds for disagreeing where the line is properly drawn. In good faith, competent judges using this formulation can clearly point to where and why they agree or disagree on what is to be included in the category of persons” (2014). In the case of AI technologies one can ask whether the current vision for the adoption of AI technologies, a vision which is mainly supporting the military-industrial complex through vast investments in army AI, is a vision that benefits mainly powerful elites.

In order to discuss these questions, one has to analyse the history of AI technologies leading to the kind of ‘humanised’ AI system this paper posits. The old-fashioned approach (Hoffman & Pfeifer, 2015), some may still say contemporary approach, was to primarily research into ‘mind-only’ (Nilsson, 2009) AI technologies/systems. Through high level reasoning, researchers were optimistic that AI technology would quickly become a reality. Those early AI technologies were a disembodied approach using high level logical and abstract symbols.

By the end of the 80s researchers found that the disembodied approach was not even achieving low level tasks humans could easily perform (Brooks, 1999). During that period many researchers stopped working on AI technologies and systems, and the period is often referred to as the “AI winter” (Crevier, 1993; Newquist, 1994). Rodney Brooks then came forward with the proposition of “Nouvelle AI” (Brooks, 1986), arguing that the old-fashioned approach did not take into consideration motor skills and neural networks.

Only by the end of the 90s did researchers develop statistical AI systems without the need for any high-level logical reasoning; instead AI systems were ‘guessing’ through algorithms and machine learning. This signalled a first step towards humanistic artificial intelligence, as this resembles how humans make intuitive decisions (Pfeifer, 2002); here researchers suggest that embodiment improves cognition (Renzenbrink, 2012; Zarkadakis, 2018). With ‘embodiment theory’ Brooks argued that AI systems would operate best when computing only the data that was absolutely necessary (Steels & Brooks, 1995). Further in *Developing Embodied Multisensory Dialogue Agents* Michal Paradowski argues that without considering embodiment, e.g. the physics of the brain, it is not possible to create AI technologies/systems capable of comprehension.

Foucault's theories are especially helpful in discussing how the "rule of truth" has disciplined civilisation, allowing for an adoption of AI technologies which seem to benefit mainly the upper-class. But then should one think of a notion of 'deep-truth' as the unwieldy product of deep learning AI algorithms? Discussions around truth, Foucault states, form legislation into something that "decides, transmits and itself extends upon the effects of power" (Foucault, 1986: 230).

Foucault's theories help to explain how legislation, as an institution, is rolled out throughout society with very little resistance, or "proletarian counter-justice" (Foucault, 1980: 34). Foucault explains that this has made the justice system and legislation a for-profit system. With this understanding of legislation, and social justice, one does need to reflect further on Foucault's notion of how disciplinary power seeks to express its distributed nature in the modern state. Namely one has to analyse the distributed nature of those AI technologies, especially through networks and protocols, so that the link can now be made to AI technologies becoming 'legally' more profitable, in the hands of the upper-class.

In Protocol, Alexander Galloway describes how these protocols changed the notion of power and how "control exists after decentralization" (2004: 81). Galloway argues that protocol has a close connection to both Deleuze's concept of control and Foucault's concept of biopolitics (Foucault, 2008: 1978-1979) by claiming that the key to perceiving protocol as power is to acknowledge that "protocol is an affective, aesthetic force that has control over life itself" (2004: 81).

Galloway suggests that it is important to discuss more than the technologies, and to look into the structures of control within technological systems, which also include underlying codes and protocols, in order to distinguish between methods that can support collective production, e.g. sharing of AI technologies within society, and those that put the AI technologies in the hands of the powerful few. Galloway's argument in the chapter Hacking is that the existence of protocols "not only installs control into a terrain that on its surface appears actively to resist it", but goes on to create the highly controlled network environment. For Galloway hacking is "an index of protocological transformations taking place in the broader world of techno-culture" (2004: 157).

AI TECHNOLOGIES AND RESTORATIVE JUSTICE: THE ETHICS OF CARE

Having said this, the prospect could be raised that restorative justice might offer "a solution that could deliver more meaningful justice" (Crook, 2009: 310). With respect to AI technologies, and the potential inherent in them for AI crimes, instead of following a retributive legislative approach, an ethical discourse (Courtland, 2018), with a deeper consideration for the sufferers of AI crimes should be adopted (Fry, 2018). One can ask: could restorative justice offer an alternative way of dealing with the occurrence of AI crimes (Etzioni, 2018; Goel, 2017)?

Dale Millar and Neil Vidmar described two psychological perceptions of justice (Vidmar & Miller, 1980). One is behavioural control, following the legal code as strictly as possible, punishing any wrongdoer (Wenzel & Okimoto, 2010), and second the restorative justice system, which focuses on restoration where harm was done. Thus an alternative approach for the ethical implementation of AI technologies, with respect to legislation, might be to follow restorative justice principles. Restorative justice would allow for AI technologies to learn how to care about ethics (Bostrom & Yudkowsky, 2014; Frankish & Ramsey, 2014). Julia Fionda describes restorative justice as a conciliation between victim and offender, during which the offence is deliberated upon (2005). Both parties try to come to an agreement on how to achieve restoration for the damage done, to the situation before the crime (here an AI crime) happened. Restorative justice advocates compassion for the victim and offender, and a consciousness on the part of the offenders as to the repercussion of their crimes. The victims of AI crimes would not only be placed in front of a court, but also be offered engagement in the process of seeking justice and restoration.

Restorative justice might support victims of AI crimes better than the punitive legal system, as it allows for the sufferers of AI crimes to be heard in a personalised way, which could be adopted to the needs of the victims (and offenders). As victims and offenders represent themselves in restorative conferencing sessions, these become much more affordable (Braithwaite, 2003), meaning that the barrier to seeking justice due to the financial costs would be partly eliminated, allowing for poor parties to be able to contribute to the process of justice. This would benefit wider society and AI technologies would not only be defined by a powerful elite. Restorative justice could hold the potential not only to discuss the AI crimes themselves, but also to get to the root of the problem and discuss the cause of an AI crime. For John Braithwaite restorative justice makes re-offending harder (1989).

In such a scenario, a future AI system capable of committing AI crimes would need to have knowledge of ethics around the particular discourse of restorative justice. The implementation of AI technologies will lead to a discourse around who is responsible for actions taken by AI technologies. Even when considering clearly defined ethical guidelines, these might be difficult to implement (Conn, 2017), due to the pressure of competition AI systems find themselves in. That said, this speculation is restricted to humanised artificial intelligence systems. The main hindrance for AI technologies to be part of a restorative justice system might be that of the very human emotion of shame. Without a clear understanding of shame it will be impossible to resolve AI crimes in a restorative manner (Rawnsley, 2018). Thus one might want to think about a humanised symbiosis between humans and technology (Haraway, 1985; Thompson, 2010), along the lines of Garry Kasparov's advanced chess (Hipp et al., 2011), as in advanced jurisprudence (Baggini, 2018). A legal system where human and machine work together on restoring justice, for social justice.

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Taxonomy of Posthuman Anthropomorphism: from Animal to Machine

ABSTRACT

The philosopher Rosi Braidotti, in her book *Posthuman* (2013), tries to update the concept of humanity and the Humanities in the context of contemporary advanced society, in which humans and nonhuman agents have become equal actors. Her criticism targets the assumptions of anthropomorphism, upon which the Humanities have previously relied. Anthropomorphism has implicitly upheld an idealized model of the human being, defined as white and male. This model has been normalized within the history of Humanities, a subject area that experienced a division from the Natural Sciences at the end of the 20th century. In contrast, Katherine N. Hayles, an advocate of another form of posthumanism, critically examined the trend of New Materialism and declared the necessity of focusing on the nonconsciousness that forms cognitive assemblages within advanced information technologies. However, while both Rosi Braidotti and Katherine N. Hayles explore trends in posthumanism and elaborate on the concept of assemblage in their own way, their explorations have one thing in common: biological concepts such as symbiosis and evolution are often imported into their arguments, whether explicitly or implicitly. This paper attempts to critically examine these tendencies using specific examples from bioart works, and reveals that the current posthumanism entails a kind of diluted animism; a concept proposed by the Japanese biologist Hideo Iwasaki.

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KEYWORDS Posthuman, Bioart, New Materialism, Digital Humanities, Assemblage, Animism.

INTRODUCTION

Saša Spačal's work, *Earthlink*, exhibited at Ars Electronica 2019, is a large installation that consists of several chambers or capsules connected by opaque tubes. In these tubes, air saturated with organic and inorganic compounds is circulating. Each capsule contains materials such as plants, water, minerals, and fungi, in addition to artificial pieces of industrial chicken bones and microplastics. This device has two stations, one called "Expiration" and the other "Inspiration." Spectators are able to bring their faces close to the work. In doing so, the spectator can exhale their breath to this ecosystem and inhale the *Mycobacterium Vaccae* being produced by the work's metabolism. Some scientific reports argued that these bacteria, which usually inhabit soil, might help to reduce human mental stress.



Image 1. Saša Spačal, *Earthlink*, 2018- © Sasa Spacal.

Spačal declares that this work is “an entrance point to the post-anthropocentric constellation of connections and environmental relations.” She also quotes a phrase from Rosi Bradiotti's *Posthuman*, which says, “[t]he relational capacity of the posthuman subject is not confined within our species, but it includes all non-anthropomorphic elements, beginning with the air we breathe” (Braidotti, 2013: 60). Thus, this work is inspired by the assumptions of New Materialism, wherein the classical idea of the human or the Humanities, which has been exclusively privileged in the Western tradition, is both revealed and denounced.

In light of the COVID-19 pandemic, which has made it more difficult to experience *Earthlink* directly, we might suppose that this work has acquired unexpected criticality. Further, this article examines some theoretical frameworks branded as New Materialism and posthumanism using the following questions inspired by this work: What is at stake when we picture alternative forms of human relationships with nonhuman agencies such as animals and machines without falling into anthropomorphism? What is an effective idea that could we draw from these theoretical trends by mating with practical examples, such as the works of bioart or the scientific practices of contemporary biology? To bring these arguments that exist within the Humanities into a more practical dimension, I would like to examine posthuman discourses by comparing Braidotti's argument with Katherine Hayles' while referencing Hideo Iwasaki, a Japanese biologist and artist.

SCOPE AND BASIS OF CRITICAL POSTHUMANISM

First, the critical posthumanism proposed by Braidotti is a methodology elaborated as a counter-strategy to the enthusiastic posthuman armed with advanced technologies and is manifested by the idea of “technological singularity”. She aims at the criticism of their implicit basis, that is “the humanist ideal of ‘Man’ as the allegedly universal measure of all things” (Braidotti, 2018: 32). Whatever the imagined future, whether utopian or dystopian, humanity has so often imagined nothing but a classical ‘Man’, idealized as white or male in the tradition of Western Humanities, inhabiting this future landscape. In contrast to this movement, Braidotti focuses on an anti-humanist tradition that is rooted in mainly French philosophical discourses, especially Gilles Deleuze and Michel Foucault, and insists on the possibility of the interspecies alliance of post-anthropocentrism without returning to neo-humanistic attitudes.

From this perspective, we can distinguish “the nonhuman agencies” supposed in this argument as animals and machines. Regarding the former, to create a cooperative and trans-species alliance between humans and animals, Braidotti often mentions the concept of symbiosis formulated by the biologist Lynn Margulis (Margulis and Sagan, 1995). To expand the scope of this concept into the transversality between nature/technology, organic/inorganic, male/female, or local/global, Braidotti posits the concept of “the assemblages that flow across and displace the binaries” (Braidotti, 2018: 33). Indeed, this is the very idea upon which Spačal's *Earthlink* is based, realizing the unique ecosystem in which humans and microbes are equal actors affecting one another.

While the concept of symbiosis has become increasingly popular and is favored as the theoretical resolution by the scholars of New Materialism, endosymbiosis was originally a biological concept exemplified by the mitochondria that settled into host cells during the process of evolution. Although we cannot examine the history of biology in detail here, we can say that this

concept was taken up by Margulis in the 1970s but could be traced back to the thinking of Russian biologist Konstantin Mereschkowski at the beginning of the 20th century (Sato, 2019). Certainly, endosymbiosis would be an effective model for envisioning an alternative relationship between humans and other species that departs from the idea of classical subject and anthropomorphic suppositions entailing it. However, it is also true that the concept of symbiosis has a somewhat optimistic and utopian tone, because the reason this model would be effective for overcoming the anthropocentrism is not explained enough. At least, some biological concepts seem to be applied in an ambiguous and uncritical way as the basis of recent theoretical discourses.

Katherine Hayles also denounced the application of symbiosis in her own critical examination of the discourses of New Materialism. For example, commenting on Luciana Parisi's argument concerning bacterial sex, Hayles has remarked that it is misleading to posit the concept of endosymbiosis as countering the neo-Darwinism represented in the neoliberalism of contemporary society. The assimilation and networking of bacteria was also, according to Hayles, the "survival strategy when the earth's atmosphere began to change and the oxygen level rose" (Hayles, 2017: 72). Furthermore, Hayles' criticism is also directed at the abstractive tones of New Materialism, which so often emphasize the ambiguous concept of vital forces almost derived from Deleuzian theory. To say the least, the tendency to treat philosophy and science equally is one of the reasons that biological concepts are often favored in New Materialism.

EVOLUTIONARY IMPLICATIONS OF DIGITAL HUMANITIES

And what of Hayles' posthumanism as she tries to develop it within the realm of Digital Humanities? Her analysis of posthuman conditions focuses on our relationship with another nonhuman agency: machines. In her 2017 book, *Unthought*, Hayles proposed the concept of cognitive nonconsciousness as emerging from the dominant trend of the science of cognitive computing (Hayles, 2017). Emphasizing the fact that recent discourses have revealed that most processes of human cognition proceed without the subject's awareness, she tries to elaborate on the concept of cognitive assemblage that describes situations in which human nonconsciousness is embedded into information technologies such as robotics, drones, and Smartcity.

The concept of assemblage can be emerged again in different ways than that of Braidotti's argument, and which clarifies another aspect of *Earthlink*. In other words, this installation, which looks like a complex device, could be regarded as a processing machine that treats the components of our breathing as a source of information within the ecosystem.

However, one feature that appears often in the description of cognitive assemblage which does not seem appropriate to the conception of *Earthlink* is the term "evolution." For example, Hayles wrote that a product, designed to

act as a “next-generation SIRI,” is one which “evolves its capacities through web reading, geolocation, mobile interactions, and real-life queries” (Hayles, 2017: 124). While the word “evolves” might have been selected to serve a merely metaphorical function here, the operation of digital assistance is not the result of evolution but rather the optimization of inputs-outputs. Her word choice here reveals the recognition underlying her understanding of technological systems as living entities. Even if the biological idea is implicitly inserted into her understanding of the machine, we should not see the evolution situated within the assemblage as equal to the biological one, as it operates on entirely different principles.

In summary, we found that biological concepts are often embedded within posthumanism, which focuses on nonhuman actors, such as animals and machines, in place of traditional humanity. However, New Materialism has adopted the biological idea of symbiosis without adequate considerations on their resources, in contrast to the Digital Humanities that show a tendency toward a progressive view of the machine. This taxonomical diagnosis is summarized in Image 2, seen below. However, the discussion so far is intended neither to judge the superiority of posthumanism nor to denounce its limitations. Rather, we would like to consider the reasons why the terms of evolutionary theory have been frequently and seemingly “non-”consciously applied in the discourse of posthumanism.

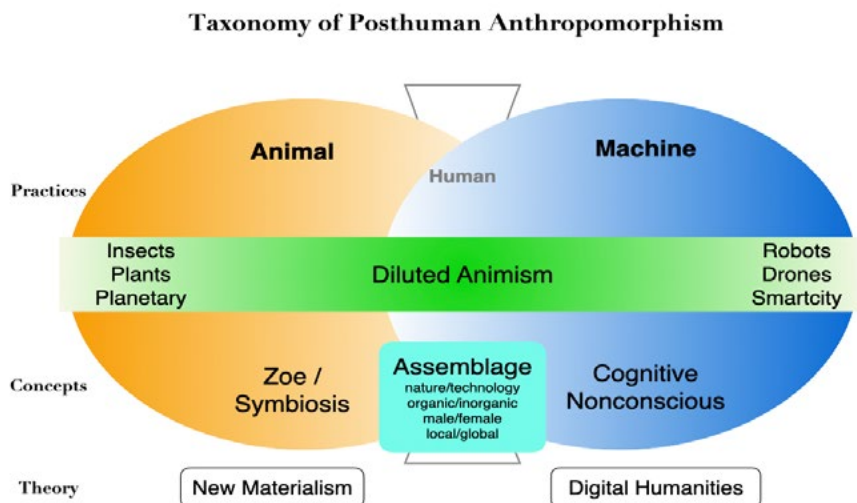


Image 2. Taxonomy of Posthuman Anthropomorphism. © Courtesy of the author.

DILUTED ANIMISM WITHIN THE DISCOURSES OF POSTHUMANISM

We can apply the idea of “diluted animism,” initially proposed by Hideo Iwasaki, a Japanese synthetic biologist and artist, to this taxonomy (Iwasaki, 2013). Although this idea was originally intended as a remark on the residual animistic attitudes seen even within the procedures of contemporary life science, Iwasaki points out that scientists could not escape from teleological assumptions about purposefulness and functionality in analyzing the movements of vital components. For example, while it might be preferable to describe the phenomena of life as the complex of pure chemical actions in an objective and persuasive way, biologists often take the perspective of one that has a specific purpose or a molecular subjectivity. As a result, they describe the behavior of bacteria or microorganism as “intentional” communications or the intelligence of plants as “beautiful” or “pretty.” Interestingly, the idea of connecting the practices of natural sciences with the bioart works is corporealized by Iwasaki’s own work, such as *Culturing <Paper> Cut* (2013-), in which his technique of traditional paper-cutting is used to extract the subjective expressions found within an academic biology paper, and where the complex design this creates is turned into a culturing ground for cyanobacteria.

In addition, the ethnographer of science technology Natasha Myers makes a similar claim. In her book, *Rendering Life Molecular*, she tries to “show that forms of animism are immanent to mechanistic logics. The ongoing oscillation between lively and mechanistic renderings produces a new discourse and way of knowing among protein modelers” (Myers, 2015: 29). In fact, her analysis leads to the presentation of the concept of “molecular animism,” which reveals a remarkable tendency for animism and mechanisms to be thoroughly entangled within the scientific procedures of the 21st century life sciences.

These concepts, the diluted or molecular animism, are not limited to microscopic entities. Several scholars, ethologists and philosophers, have begun to consider numerous behaviors of nonhuman species that do not fit into the category of anthropomorphism (Bekoff, 2007; de Waal, 2016; Godefroy-Smith, 2017). There is no room in this paper to examine them in detail and they could not strictly be called animism. Nonetheless, if the concept of emotion or affect are key terms in reconsidering the nonhuman species, these discussions could be extended to and relevant to the cognitive assemblages as Hayles mentioned. Further, it would be possible to situate and evaluate the arguments on the companion species proposed by Donna Haraway within this context (Haraway, 2007).

In order to develop such a discussion, it would be significant to identify firmly the “diluted animism” that appears in the discourses of New Materialism and the Digital Humanities examined above. Because in the former, symbiotic relationships are often posed as vital forces for bridging between humans and animals, while the latter have imported, whether explicitly or implicitly, the concept of evolution into descriptions of machines or technologies. For connecting the recent trends of Humanities with natural sciences effectively, we cannot be too vigilant in reappropriating their terms for the posthuman ecologies.

However, I would like to once again stress that this paper does not intend to dismiss the theoretical possibilities of such discourses. Rather, this paper tries to reveal the ways in which we are forced to adopt a kind of diluted animism in overcoming the anthropocentric tendencies that have pervaded within the Humanities. We suggest that it would be useful to inherit their critical stances and update them for coexistence of humanity with animals and machines in the so-called Anthropocene. This could only be made possible through the development of constructive and dialogical relationships between science and art, as realized by Saša Spačal's bioart work. The tentative taxonomy of posthuman anthropomorphism presented here is an attempt to begin to develop such a relationship.

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Cyborg – Author in the Model of Digital Layout

ABSTRACT

Unlike a rectangular grid arrangement, electronic writing has a character of a cross-linked and developing writing technique. The network of interconnected hypertext was compared with the human neural network (Aarseth, 1997; Bolter, 2001). Writing identity was reflected in hypertext, as dynamic, flexible, variable, and even random. According to several authors (Manovich, 2001; Aarseth, 1997; Bootz and Baldwin, 2010 and others), a paradigm of digital mediation is manifested by changes in the approach to the production, storage, media distribution, and reception of literary, conceptual, or other “textual” artworks. In the position of an e-literature programmed form, Philippe Bootz reflected those changes in his description of a procedural model of communication and the introduction of performative signs as a part of the aesthetic approach.

The information which flows from the source (made by cyborg authors) to the target (cyborg reader’s reading) could be represented, materialized, or embodied by the digital text layout, which will be shaped on/in various interfaces, instead of the plane and rectangular of “screens”. Digital text which is manifested by a layout should take place on/ in current and future, digital and hybrid interfaces. This kind of layout could drag the reader into the text work, and closer to its essence. The posthumanist approach of the digital layout problem solution will change the point of view, which is focused on a human, to the wider equal interrelations of technical, biological and human intelligent actors.

KEYWORDS Digital layout, algorithm/process duality, posthumanism, transient pattern.

INTRODUCTION

In this paper I am interested in the problem of digital layout¹ to define it and to describe a model of a digital text organization without prejudice of grid pattern. The problem will be solved in the experimental and complex way, in the meaning of the change media representation. Cyberspace, in which is digital text manifested, relates to the change of its production and perception. These changes bring inevitability of alternative approach of the solving digital layout without connection of grid pattern – in the meaning of most narrow interconnection with signification of the text and with variability of many interfaces in which it could be manifested. This alternative transdisciplinary ArtSci approach of digital layout model will open the space of thinking about it and will bring redefinition of digital layout in the wider view. The question is: If a contemporary approach to the digital text organization is in a sufficient condition for a text producing and reading also, why do we have to find a new alternative model of digital layout and finally why must we redefine it?

The scope of thinking about digital layout is based on the electronic literature approach of production and perception. Namely redefinition of author and reader, materiality of digital text and many possible interfaces where could be placed text. The other scope is in the long time discussed and theorized model of hybrid forms based on the ArtSci approach. A long historical line of literary and typographical approach to a text layout, out of the grid model pattern, is acknowledge of possible alternative of digital layout model (Cramer, 2005). This alternative and experimental approach to the layout, neverminded if it was made by literary authors, by conceptual artists or typographical designers, often led to formal artistic representation of a text.

Rhizome is a metaphor of arrangements, which could inspire our thinking about digital layout in the position of unstable form. The digital text materiality is defined by the relation of digital text code layers and relation of text and random elements influences its form. Together with changed relations in which is text produced, perceived, and manifested it bears background for redefinition of layout not only in the digital, but also in the hybrid space of a text representation. New focus in which will be find the definition of digital layout and model of its production will lead to new hybrid forms of layout as a complex of relations and materiality.

On the background of these arguments, I am bringing new theoretical model of digital layout. The approach in which the new digital layout is created

1 In Design Dictionary (Erlhoff and Marshall, 2008) layout is defined as: “A layout is a graphic design in which a designer establishes the arrangement, proportions, and relationship between the individual elements on the page to be designed, that is: the images, body copy, headings, captions, and other graphic elements. This is often based on a design grid. The challenge is to visually structure content and to create graphically exciting references. The format depends on the requirements (poster, flyer, brochure). The medium is usually print, yet the graphic structure of a web site can also be called a layout. Etymologically, “layout” refers to its history as a manual skill when design elements were laid by hand on an assembling surface and manually placed on the page. Today, all stages of a layout, from design to print, are created virtually on a computer using software”.

leads to an inevitability of human and machine intelligent agent collaboration – in position of hybrid intelligence, in where the interrelation of human author and nonhuman agents leads to the open vision of digital text production in the representation of its layout which could be manifested on/in many different interfaces. The model will not be determined by the actual hardware but will be connected with meanings of a text and many possible interfaces manifestations.

Artistic communication carries the value of aesthetic action, which draws the audience into the imaginary world of the author's work. A digital work, as a e-literature work also, essence is represented by material particles of artwork, which are arranged by patterns opened to audience reading. In the digital space they are specific, unstable, changeable, multiplied and build aesthetical paradigm of digital art, but also the paradigm of communication as well.

We know that every text mining is float by the context with the other texts. That intertextuality is the same in the printed text as also as in the digital text, but a digital text is only connected by hypertextual relations. Digital discrete representation is in computer manifested by discrete patterns (as pixels, signs, scripts...). These are regrouped, what is costs by modular organization (Manovich, 2001) generating patterns. In digital text patterns, the organization is based on arbitrary connections caused by code layering. Database algorithmic definition of this modular structures provides variability of digital layout visual solutions. Interference with the textonic layer (programming language layer) can completely change the meanings of the scriptonic layer (cultural language of text)². If the core of such a structure does not change, then the variability and multiplicity of manifestations of these digital objects arises (Manovich, 2001) - i.e., the transient state of media representation or manifestation of programmed digital text in the form of its layout.

Hypertext is a specific form of relations between texts in the digital space. It is an example of that transient, physical, links. Hypertext relations are represented by algorithmic attribute as href, url, uri, title, target, rel, download, name ..., or with visual schema of structural models of electronic literature. So far, there is no possible way to capture changed hypertext links, as well as the possibility of how the common reader can visually be oriented in a changing hypertext structure. All ways of links have an algorithmic nature without visual navigation. Nodes of connections and the graphically schematized patterns of hypertext narrative structures (such as Marie-Laura Ryana, Mark Bernstein, Beat Suter, and others) are highlighted visually.

Some progress in the research topic was brought by the hyperlinks schematic visualization of semantic web. Algorithmic sign, is put in the textonic layer of a text, is not visible for a common reader. Even though algorithmic interconnection, which is made by command (for example url address) and is sufficient to build up hypertext content but is unstable and changeable. Digital layout in the meaning of visual manifestation of digital text and its connections between texts (as hypertext links) is inevitable to solve by including actors of that changes.

² In traversal function (Aarseth, 1997) e-literature text was described as textonic layer (programming language), i.e., organized scriptonic layer (readable e-lit. text).

Digital space is a collaborative space in which neither human nor computer intelligent agents are left alone. If actors of digital text production are represented by computer commands or algorithms, their “collaborative algorithms” are a part of every manifestation of a digital text. The interactive reading and digital text manifestation on/in possible interfaces could be unpredictable, or random. Algorithm of digital layout will take command of interrelation of defined and actual random iteration agency of human, nonhuman actors and place of digital text manifestation processed by computer intelligent agents and manifested in the patterns of digital text organisation.

CYBORG AUTHORS IN THE PROCEDURAL MODEL OF COMMUNICATION

Espen Aarseth in his concept of cybertext distinguishes the traversal function of a digital text, in which was described relation of text material with cyborg-author and cyborg-user (Aarseth, 1997). Also, Philippe Bootz in the procedural model of communication described human (author and reader) and machine relation in which is developing a text of programmed e-lit work. Bootz describes all kinds of participation and each state of production and perception of electronic literature communication. In the “Cross Reading” method, he uncovers the principles by which the reader can approach more closely the essence of literary artwork.

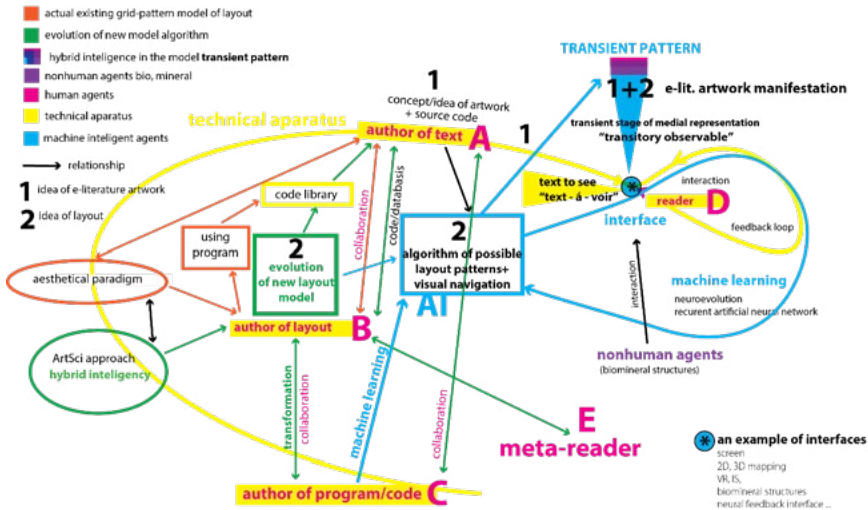
Procedural model is a description of extensive parts of artwork, during the contact with subject and most important kind of relation with the artwork. According to Bootz (also other authors), human subject or agent is put in the role of participation with the artwork by his/her activities. Along those activities are constitute extensive parts of artwork. As an author code, author words, reactions of reader...they are in direct connection with that activities and initiates undirect relations with essence of artwork. They are parts of parergonic artwork body. They are put in countervalue to code source and media artwork result which is represented by „transitoire observable „state (forth T.O.) T.O. is produced by execution of artwork, very close relation to artwork essence. In the procedural model there is initiated the digital body as material of extensive parts, which relate to the artwork essence by the strong relation. Digital body is made by code source, parergonic body - made by author document, T.O. (made by reader interaction) and by secondary discussion of meta-reader (Bootz, 2010).

The algorithm of layout then could be applied by the author’s document. Author makes his/her document through the source code, in which is applied the algorithm of possible patterns of layout, he/she affects on the apparatus. Within the reader’s document, a development then takes place, which leads to T.O. The cross-reading process involves a meta-reader who can read the author’s document with code, knows the apparatus, the reader’s feedback on the apparatus, and T.O. and participates in a secondary discussion (Bootz, 2013). This model and the method lead to defined position of designer authors. They are the part of material particle of artwork and the part of process of communication by their element of layout production.

TO THE BOOTZ SCHEME

In the Bootz scheme, I add the position of designers - creators of layout and describe their relationships to other actors in the creation of digital literary work. (see Figure 1). Digital layout is then a part of a dynamic, changeable manifestation of authors artistic expression manifested on/in the many possible interfaces and its very close to artwork essence, by its extensively particles. Designers, who are a part of digital layout production, are also one of the first readers of the artwork, because the text is material of layout production. For it they relate to its essence although they create nothing from scriptons (for reader visible) layer, but they input their part of code to the textonic layer (authors code, algorithm). Then they can visually modify text by the source code in the collaborative algorithm of digital layout production, always in the sense of Cyborg author, because they are related to apparatus. However, other agents also enter these relationships, such as: programmers, computer intelligent agents, and agents forming various possibilities of a hybrid form of interfaces (virtual and bio/mineral agents). Each action is coded and becomes a part of the digital text manifestation process.

The Evolution of digital Layout in Procedural model of communication



Scheme 1. The scheme was developed by using scheme of procedural model of communication described by Bootz (2006). © Courtesy of the author.

The algorithm of the layout, which is made by designer, is then the application of the results of meta-reading data. The part of algorithm could be a component of algorithmic libraries that present the initial pattern of styles or genres. Digital

layout patterns is created by the relationship between human and machine intelligent agents. Feeding by the data and by random elements could be learned artificial neural network and neuroevolution (such as reading preference and the possibility of manifestation on various interfaces) and create possible forms of digital layout (see Figure 1). What kind of pattern are such “possible forms of digital layout” represented then results from the materiality of the digital text itself?

MATERIALITY OF DIGITAL LAYOUT

Transient Pattern

In the case of description e-lit artwork Espen Aarseth writes about textonic and scriptonic layer of digital text materiality. Katherine N. Hayles divides these layers into: textonic - machine layer of binary code (1, 0), computer language layer (for example Python, C ++...) and scriptonic layer of cultural language. The machine layer is connected to the scriptonic layer by the relations of arbitrary signification. Depending on the reading method, the textonic layer of the computer language can become a scriptonic layer. Hayles defines the representation of a printed literary text by the relationship of presence and absence and a manifestation of digital literature she presents by the relationship of “pattern and randomness”. Hayles calls for different kind of signification in the digital space because changes of manifestation of the digital text was caused by specific kind of signification. Hayles describes it by “flickering signifiers”. for all that Katherine N. Hayles changed the representation of printed text to manifestation of digital text.

Katherine N. Hayles and Donna Haraway, both used structuralist tool – “semiotic square” in the context of posthumanistic thinking related to sign, which is represented, manifested, or articulated in the digital environment. Haraway writes about articulation of hybrid forms and Hayles about material manifestation of embodied information in the context of e-literature artwork which is related to flickering signifiers. Interconnection of both approaches could be brought light to the room of digital layout form. I defined grid pattern model of printed layout analogical by homologic deduce to parts of Hayles semiotic square in the points the representation of printed form of literature as *Presence/Absence*. Grid pattern as a Presence I put to the complementary opposition with white or black empty space sheet of paper as absence, which is actual representation of printed text layout. This representation in typographical context is well known as creating visual references through the interaction of elements on the page.

The other relation in the Hayles semiotic square is Pattern and Randomness. This relation is connected to digital text manifestation. Randomness is organisation of a text which does not relates to the any model or calculating³. In the next step I follow practice of Donna Haraway. In her approach there is a change of position and reading direction. Randomness and Pattern organisation changes their position (see scheme 2.) Subsequently, a real space relationship is created - by

³ Textual elements that are not organized into any pattern and have no relation to any other element (Elam, 2011)

grid pattern of the layout of the printed text; outer space - I relates to a "white-black" paper place; inner space - I assign the operating space of programmable media and virtual space, to which I relates computer media and its manifestation on a possible interface.

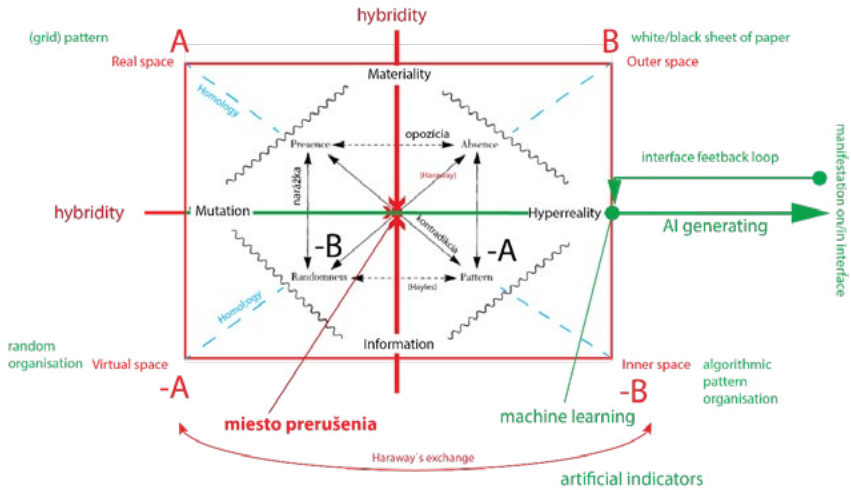
From such a homology relationship, which I describe in Scheme 2, I can describe my solution. The(grid) pattern-based layout of printed text, in the scheme is recognized as real place, is in relation with environment of the outer space of the white/black sheet of paper. By changing the environment - from printed to digital - materiality of text, also its layout was changed. In the case of programming forms of digital text, a digital layout is formed by the inner space of virtual space in the different conditions than the layout of printed text. Different materiality of printed and digital text relates to different organisation in the layout, which is triggered by "bifurcation point" in the moment of the random element action. Random elements manifest itself by possibility of manifestation on a diverse interface and interactive input of the reader. The pattern is then reorganized by the internal space of the programmable medium. Process of the pattern reorganisation is manifested at the intersection of the horizontal and vertical axes. The horizontal axis of the square will cause mutations manifesting in the hyperreality. The vertical axis of a square is the embodiment of the information that the text carries. The result is the currently updated "hybrid form" - a changing pattern embodied on / in the current interface, which I called the transient pattern. The transient pattern is then a confirmation of the changed approach to the digital layout resulting from the interaction of the described elements.

Transient pattern is a model which operates between arrangement of pattern and randomness. It is caused by interrelation of technical/nonhuman and human actors, who produce data in the feedback loop. The data becomes a part of the machine learning of intelligent computer agents of a recurrent artificial neural network and/or neuroevolution, in which the pattern arrangement is updated by a hybrid approach. The transient pattern is an actualization of the organization in the relationships of the digital text with the current interface in the form of the current layout and relationships of the text with other texts in the form of the current visual navigation of the current hypertext relationships. The digital layout demonstration takes place on/in various existing and emerging interfaces.

The construction of language and writing captures the processes of thinking, analysis, synthesis, and reflection, but also the processes of dreaming, fantasy, and fiction. It is related not only to recording the contents of the human mind, but also leads to the expression, categorization of human identity, which is currently happening in the discourse on writing extended by electronic media. Text is a material where ideas are manifested and it represents language, but it is also a material of text layout creation. If a designer represents his or her artistic attitude toward this material, he or she must know it well. Deeply developed method of arranging the printed text was based on the organization in the grid pattern. Digital text differs from printed text not only by the environment in which it is represented or manifested, but also in the changed relations between authors and readers and the relations between the texts themselves. Espen Aarseth defined the position of the cyber author and analyzed the positions of the interactive reader/user in different genres of e-literature.

Semiotic square

- Donna Haraway - hybrid forms
- Katherine Hayles evolution of digital text materiality
- Andrea Gogova evolution of digital layout materiality



Scheme 2. Developing of digital layout form from approach of Hayles(1999) and Haraway (2004) approaches. © Courtesy of the author.

Through a procedural model of communication, Philippe Bootz explains the complex relationship between the author (s), readers, and the technical apparatus in which a programmed work of electronic literature develops and how the essence of an electronic literature programmed work can be approached. Using Aarseth's definition and Bootz's model, in this paper I defined the position of the designer in relation to other actors involved in the development of a programmed e-literary work. In the model of communication, digital text turns into a performative sign, which is manifested by unstable and changeable form of text manifestation.

Materiality of digital text was defined by Katherine N. Hayles as relationship between pattern and randomness. The form of the digital text arrangement based on the materiality and relations, which I describe as a variable evolving model of digital layout. In this paper, I brought a hypothetical solution - the model Transient Pattern. The digital layout is then defined by following the materiality and relationships of the text operating in the digital environment and its manifestation on / in possible interfaces in the changed positions of the approach of production and reception of the digital text resulting therefrom. The flexible shape of complex and experimental digital layout solutions could be manifested on/in many different interfaces. The model offers a space in which the creation of a digital layout could take place in different solutions - free of a grid pattern organization. These considerations pave the way for a new approach to the formal grasp of a digital text arrangement in a more comprehensive, unbiased, and experimental way. The new approach subsequently leads to a change in

the aesthetic paradigm in the digital typographic design: from creating a digital text layout as a finally programmed form of an object to variable variations in the process of running the program. It includes a dialectical complex pattern (presenting a systematic rational formal approach) and randomness (of actual reading and variability of interfaces) that open access to hybrid forms. The solution enables the flexible organization of a text in digital and hybrid spaces, in current and future conditions of monitoring the possibilities of new techniques of text production and reception co-created by human, nonhuman and computer intelligent actors.

The creative tool used, which is known as hybrid intelligence combined with a changing aesthetic paradigm, interconnects human and artificial intelligence through programming skills or coding. This approach plays an important role in cultural life also. It evolves rapidly and influences our perception, authorial and reading behavior.

The development of digital text layout solutions, connected with AI also leads to a change in the usual patterns of text creation and reception. According to Lev Manovich, new aesthetic-semantic forms of art, independent of meta-patterns, occurs in the expansion of human perception and awareness of new contexts (Manovich, 2019). It is possible to get over the current limits only by the mutual interaction of artificial intelligence and the creative human spirit. Hybrid intelligence brings new possibilities for solutions, pushes our thinking beyond the supposed boundaries of our body and distances human from an egocentric view to an approach that accepts the equality of all forms of existence. A work of art, which was perceived as a sovereign manifestation of human genius, can then arise in the relationship between the “human” and “nonhuman” actors of their work.

CONCLUSION

The flexible shape of complex and experimental digital layout solutions could be manifested on/in many different interfaces. In this work, I brought a hypothetical solution - the model Transient Pattern. The model offers a space in which the creation of a digital layout could take place in different solutions - free of a grid pattern organization. These considerations pave the way for a new approach to the formal grasp of a digital text arrangement in a more comprehensive, unbiased, and experimental way. The new approach subsequently leads to a change in the aesthetic paradigm in the digital typographic design: from creating a digital text layout as a finally programmed form of an object to variable variations in the process of running the program. It includes a dialectical complex pattern (presenting a systematic rational formal approach) and randomness (of actual reading and variability of interfaces) that open access to hybrid forms. The solution enables the flexible organization of a text in digital and post-digital spaces, in current and future conditions of monitoring the possibilities of new techniques of text production and reception, co-created by human and computer intelligent actors. At the same time, it changes our understanding from redesigned forms of grid or template principles to variable designing by computer processes.

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Sacred Circles: Mandalas and their many dimensions in Art, Education and Therapy

ABSTRACT

The purpose of this paper is to discuss the use and many aspects of circles and mandalas both as geometrical shapes and metaphors found in art, education and therapy. Usually, a mandala is a geometrically arranged circular shape with various subsections and symbols. In eastern cultures, its purpose is to give the disciple the chance to mentally navigate its structure from the outer circle towards its centre. Circles are inscribed in our human nature, from the beginnings of ritual and primitive dances, from the moment of our conception and silent life in our mother's round belly. It is an archetypal symbol. In traditional shamanic practices, a circle was used during a methodically planned ritual to protect the shaman from the spirits as they exited the body of the person that was under psychic attack. In Buddhism practices, mandalas are used as a meditation tool. Carl G. Jung, following his own internal explorations into the world of the subconscious, encouraged his patients to paint mandalas in an attempt to dive further into themselves in order to reach their center. Recent scientific research shows the impact of Mindfulness meditation and mandalas on education, predominantly, on special education. The rose, rosettes, rose windows will be the focus of this paper regarding sacred circles and art. Macrocosmically, it symbolizes the circular world, consisting of circular galaxies, circular solar systems, circular planets, as well as the cycle of life. It has been morphologically linked since ancient times with the themes of birth and rebirth, while the speed with which it withers is a symbol of death and how fragile life is.

KEYWORDS Mindfulness, learning difficulties, mandala, therapy, art, circle, education, rose.

MANDALAS: ACTIVE IMAGINATION

Carl Gustav Jung, the founder of analytical psychology, started painting Mandalas in his personal diaries around 1916 (Jung, 2009). Through personal explorations, Jung came to believe that drawing mandalas was an important spiritual exercise which proved the complexity of the psyche and that logical explanations were insufficient to explore its deeper aspects.

The procedure consisted of two stages: first the patient was encouraged to draw intuitively whatever emerged from his inner world, without any instructions, and then to discuss explanations and interpretations of their drawings, which ultimately resulted in the alleviation of the patient's symptoms (Jung, 2009).

In Jung's personal diary titled *The Red Book*, we find a variety of drawings inspired by various cultures, from Tibetan monks to American Indian shamans (Jung, 2009). Jung was an avid researcher of ancient civilizations and enthusiastic about a variety of sacred and occult texts (Goodrick-Clarke, 2008). He perceived the journey of therapy to be similar to the way a Tibetan monk would use a mandala for his meditation practice: first he would meditate upon the outer realm of the mandala, where the demons-guardians are safekeeping the entrances that lead towards the centre of the mandala, which would only be accessible to the initiated disciples.

In a similar way Jung invited his patients to be methodically initiated into their own mysteries of life, first examining their everyday life, before moving towards the centre of their existence, a challenging process he named "Individuation" (Jung, 1997). The patients created these drawings in a state of reverie, allowing the emotional processes to be expressed on paper without inhibitions. Jung asked his patients to create a mandala following a process he called "Active Imagination", during which the patient was asked to free-dive into their internal realms meeting both demons and angels.

Jung's process of Active Imagination had interesting parallels to both the meditation practices of the Tibetan monks, where one is asked to reach his highest spiritual self, and to the shamanic practices of the native Americans, where the Shaman is required to fight off the evil spirits and to reach a trance-like state where one can heal himself from within (Jung, 1997). However, Jung's Individuation process had significant differences from the rituals used in Tibetan monasteries, especially regarding the impermanent nature of the latter. The Tibetan monks create the mandalas using coloured sand granules intentionally using no glue or other adhesive to secure it. The mandala, once finished is destroyed in a special ceremony, where all sand is dusted away and carefully deposited in near-by lakes and rivers, following a long and impressive procession, symbolising the fragility of life and the capacity of energy to change forms. Similarly, in the circular shapes drawn around the patient during shamanic rituals of the Dine peoples, the Shaman uses the circumference of the mandala as a safe and protective border between the diseased individual and the therapist-shaman, who evokes the spirit out of the body and fights it off. The circle is consequently destroyed having served its purpose (Purce, 2003), which would be to create a health-barrier between the individual and the world. Jung was fascinated by the circle and combined it with the spiral in

his individuation process, where one can travel from the exterior to the interior, embarking on a magical and challenging journey to decipher the mystery of existence (Jung, 1997).

CIRCLES AND THE SELF FROM CHILDHOOD TO ADULTHOOD

Research conducted with infants revealed that humans are born with an innate desire to observe circles. More specifically, one-week-olds prefer to observe circular line patterns, rather than patterns with straight and curved lines (Fantz & Miranda, 1975: 224). In 1997, Alan Slater argued that three-month-olds preferred to look at complete structures such as circles which provided them with a sense of familiarity rather than intricate designs. According to Gestalt psychology patterns such as circles are recognized by the individual as something important, as something whole and meaningful (Benjafield, 2008).

The primary art expression of young children is random lines, smudges and at the age of about two they begin to draw circular patterns. Gradually the design of the circle becomes clearer and at the age of three they can give meaning to their drawings. At the age of four they are capable of creating more complex shapes. Without any guidance or training from adults, children of different cultures from all over the world manage to draw dazzling suns, mandalas, flowers, little people with round heads and arms and legs jutting out of the body. Drawing circles is part of a person's maturation process. Mandala drawing is an integral part of the discovery and development of the sense of self (Kellogg, 1984).

The mandala functions as a mirror that reflects the psyche of the individual, regardless of age. It is an inner communication, a bridge between the early "I" of the child's psyche, the first immature portrait of the self and the one that exists in the present, in the now. It is as if through their design, individuals are reborn and given the opportunity to redesign their identity. The mandala drawing in art therapy encloses a dialogue between the I and the inner self; this non-verbal expression, reflects the psychological state of man, his view of his place in the world and his connection with the body (Kellogg, 1984).

MANDALAS, THERAPY AND CHILDREN

Mandala is defined in art therapy as any design in a circular form. Art therapy gives the patient the freedom to create the mandala without restrictions and delimitations, thus creating a door, an opening to reveal the unconscious (McGinnis, 2013: 35). The patient decides what to paint and how much in the circle. In fact, the mandala traps the individual's attention and leads him/her to a meditative state. This technique, when applied to children helps them to improve their concentration, to feel safe in the circle, to let go of control, to free themselves from restrictions and attachments, creating space for the absolute freedom so as to bring out the freedom of absolute expression through the personal mandala (Cambell, 2012).

In a research study carried out on a sample of children, and adolescents, aged 9-20, who face health problems and difficulties, such as Human Immunodeficiency Virus (HIV), Fetal Alcohol Spectrum Disorder (FASD), Attention Deficit Hyperactivity Disorder (ADHD), the participants were requested

during the session to create mandalas drawing on their experience related to the issues of everyday life that concerned them. The researchers noted that the issues raised were related to medication, hospitalization, interpersonal relationships, hobbies, anxiety and fears. In addition, the colors they used were symbolic, as red often symbolized HIV, yellow and purple symbolized optimism, good social relations and spirituality, black symbolized threat and blue symbolized peace. This research provides information on how children and adolescents can express and share their feelings about what they are experiencing using non-verbal techniques. The results of the research are limited as these are case studies. However, researchers have observed that mandalas significantly helped these children to concentrate and cope with traumatic experiences (Becerra, 2017).

In 2007, Henderson, Rosen and Mascaro, conducted research to study whether coloring a mandala can have a positive effect, reducing symptoms resulting from depression, anxiety and post-traumatic stress disorder (PTSD). The research sample consisted of undergraduate students who had to deal with stressors and excluded those receiving medication or psychotherapy. Participants were given questionnaires that assessed the symptoms of anxiety, depression and post-traumatic stress that they experienced in three different phases. Initially they were given one questionnaire before the start of the artistic activity, another on the third and last day of the study and another after a month. For three consecutive days they were asked to do the same 20-minute art activity, where they either had to paint an object they observed in the room or draw a mandala. The instruction for those who chose the mandala was to create a circle and within it, using symbols, patterns and colors, to represent their most traumatic experience, their feelings. In the last session participants were asked to describe and analyze their personal mandala. The results of the research showed that the students experienced traumatic symptoms during the first activity; however, in the session taking place one month after the mandala activity participants recorded a reduction in the symptoms. Researchers also observed a reduction in the symptoms of post-traumatic stress disorder. Participants symbolized their feelings in a similar way using dark colors for grief and painted tears and broken hearts inside the mandala. After analyzing the data provided in the questionnaires, researchers concluded that this process of self-expression helped the participants to somehow reconcile with their trauma (Henderson, Rosen & Mascaro, 2007).

Stress takes over people's lives and overwhelms them with negative thoughts, creating the reality of their lives. It can give rise to phobias, panic or lead to anxiety disorder. In recent years there has been a significant increase in the occurrence of similar symptoms. Curry and Kasser conducted a research in 2005 using coloring therapy which combines art and meditation to observe the effect on stress. The research sample consisted of 84 undergraduate students, who were divided into groups of 2 to 7 people. At the beginning participants were given 14 items of the State Anxiety Inventory so as to measure the level of stress they experienced. In the second phase, they were asked to think about a moment in time when they felt most frightened and to write about this experience within 4 minutes. In the third phase of the research, groups were randomly assigned to draw a mandala pattern, a checkered pattern or draw on plain white paper. All

participants had 20 minutes to color the pattern they were assigned the blank paper with 6 colored crayons. At the end of the activity, participants completed the State Anxiety Inventory again. Researchers found that participants who colored the checkered pattern and the mandala showed a reduction in the level of stress they experienced, due to the fact that they felt they were in a somewhat meditative state. In contrast, participants who were assigned the blank paper felt confused about what to draw or did not draw anything for the entire amount of time they were given (Curry & Kasser, 2005).

ROSE, ROSETTES AND ROSE WINDOWS: SACRED CIRCLES AND ART

By name, the most circular flower is the rose (from Greek, meaning round), also known as the flower of life. Macrocosmically, it symbolises the circular world, consisting of circular galaxies, circular solar systems, circular planets, as well as the cycle of life. The rose has always had a special meaning in Christianity as a symbol of Paradise and heavenly bliss, but also of the innocence and purity of the Virgin Mary - the white rose, the mystical rose (Cooper, 1979).

The Virgin Mary is referred to as *the rose without thorns* or *Rosa Mistica*. The Rosary took its name from the Latin word *Rosarium* which means *crown of roses*. In ancient Rome it was customary to throw rose petals in the path of the emperor and the crown he wore on his head was also made of roses. Before the advent of Christianity, the Romans celebrated a holiday called *Rosalia*, which was associated with the worship of the dead (between May and July), which later became the Pentecost of Christianity. In these Roman customs, roses were offered to the souls of the dead. In previous centuries, during Pentecost, it was customary to throw rose petals like rain on the faithful to honor the descent of the Holy Spirit, a practice still alive in the Catholic Church.

A rosette is a round, stylised flower design, a timeless jewelry, symbol and amulet. "The rosette design is used extensively in sculptural objects from antiquity, appearing in Mesopotamia and in funeral steles' decoration in Ancient Greece.

Rose windows are also called *wheel windows* or *Catherine windows* after Saint Catherine of Alexandria, who was sentenced to be executed on a spiked breaking wheel, which is her iconographic attribute. The origin of the rose window may be found in the Roman oculus (eye).

In Plato's *Timaeus*, 32-35, we read that the circle is the most perfect of all shapes, so God gave this shape to the world, a notion that applied to the Medieval world as well. In many medieval churches in the nave, such as in Chartres Cathedral, there were mosaics or designs of circular, mandala-like labyrinths that symbolised the route of the pilgrims to the Holy Land, marking Jerusalem in the centre (Fincher, 1991: 11). Since the time of Stonehenge or the Mycenaean circular tombs, to attempt but a time leap, or the Pantheon and the domes in the Renaissance, the circle bears mystical, secret and sacred meanings. The circle is a symbol of protection and defense, as archaeological findings denote in towns and temples or graves that are surrounded by circular constructions (De Martino, 2008). The idea of a magic protective circle runs through the world folklore and literature, as well (Stewart, 1994: 91). Traditionally, circles were believed by ritual magicians to form a protective barrier between themselves and what they summoned.

The importance of shapes has a *metaphysical* effect on our senses. Shapes are not only geometric representations, but also aesthetic and Kandinsky wrote extensively on that issue. We can see the circle or the square as a given form, but in the background their essence is indefinite, felt and understood through archetypical passages in the brain. Scientific research has shown that seeing and creating a rosette helps to rebuild the weak cells of the body. In addition, it has a beneficial effect on the central nervous system by balancing the two hemispheres of the brain (Curry & Kasser, 2005).

The psychodynamics of the circle is powerful and applied to the arts as well, through the use of the iconographic motif of the mandala, the rose, the rosette and tondo compositions, either straightforwardly seen or running in the background of the mind of the viewer as they are hinted by the overall architecture of the picture. The circle enhances the sense of unity, equilibrium and safety, the feeling of wholeness and it corresponds to the viewer's inner need for peace, harmony and undisturbed flow or continuity, triggering our earliest memory or sense of being in our mother's round womb. For example, in Botticelli's tondo *Madonna del Magnificat*, owing to a special bend of rounded lines and a general circular tempo, the picture gives the impression of being painted on a convex surface. The sophisticated lines of the hands around the figure of the infant Christ persist with the gesture of one of the angels and eventually meet the crown of Mary, thus creating an unfinished symphony of peace and tranquility. Another example of a suggested circle we find in Matisse's "The Joy of Life", 1905-1906. In this painting, the lines and volumes indicate a circle, as do the curves and serpentine arabesques that define the women contours and the curvilinear lines of the trees, hence the feeling of pleasure and harmony the work conveys.

Art expresses the function of the soul, of our inner life and circles are beyond geometry since they speak an emblematic, archetypal, sacred language.

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Psychedelic Technologies: Reconfiguring the Ecosystem of Subjectivities

ABSTRACT

During the course of the past century, psychedelic substances have moved from CIA-investigated potential mind-control technologies, means to liberate the mind in the 1960s counterculture, to being placed into the government-defined taboo category. Yet since the turn of the millennium their status in society is slowly changing again, thanks to a resurgence of psychedelic studies demonstrating the mental health benefits of psychedelic-assisted psychotherapy. But in how far may the current Psychedelic Renaissance hold the potential to reconfigure the ecosystem of subjectivities, and as a consequence induce broader social change? This contribution discusses psychedelics as psycho-spiritual-social technologies that allow to alter subjectivities in a variety of ways, depending on the intention/mindset of their users and the relations established between human and (non-) human others. I argue that psychedelic technologies can enable a transgression of three entangled societal taboos but at the same time also run the risk of being co-opted by capitalist forces at this point in time.

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KEYWORDS Psychedelics, taboos, subjectivities, capitalism, healing, transformation, ecology.

BECOMING A PANTHER ON CACTUS TEA

I'm standing in front of a sizzling fire, in the middle of a hut in the mountains of Ecuador. Around me are 25 people from all over the world, their eyes transfixed on me. I'm the next person to come up to the fire to talk with the shaman. We all came here to drink San Pedro cactus (Image 1) tea and ayahuasca for a twelve-day retreat. We all came here to change our consciousness and heal the wounds of modern civilization with these ancient technologies that are forbidden and not available in our home countries. We travelled thousands of miles to assemble in this ceremony that transpires in my consciousness as a hybrid between a religious ritual, group therapy session, and theatre performance.



Image 1. San Pedro cactus garden at the retreat center. ©Claudia Schwarz-Plaschg

I look at Salvador, the shaman, whose impish smirk and truth-telling words reveal that he is firmly rooted in that mystical land where we all feel at home but have not yet build our house. He appears as the embodied knowing of the ancients, evoking in us an awareness of the basic elements of life—water, earth, air, fire—and of what truly matters. Never have I felt so much empathy with strangers who are sharing their inner-most struggles in front of that fire. Burning what is no longer needed. With Salvador's help peeling all the false self-stories away, layer by layer. I move in front of the fire, I feel the mescaline pulsing through my body. Warm. Tingly. Suddenly I feel powerful. The tears and pains from the beginning of the 14-hour ceremony are long gone by. But I don't feel like speaking. For me it is about coming back to my body, about embodying a form that I felt had betrayed me in the past. My body starts to move as if on its own accord, no conscious decision-making seems to be occurring. A dance happens (Image 2).



Image 2. The author reperforming her fire dance at TTT2020 ©Claudia Schwarz-Plaschg

I play with the fire—we exchange our energy. Salvador and his assistant start to play their instruments, and my movements and their music coalesce into a sensual fabric that cannot be torn apart and work together to imbue this moment with a significance I cannot put into words. Salvador said to me after the ceremony: You reminded me of a panther in the night. Ironically, I felt that these big cat movements allowed me to become more fully embodied as a human being again. Going up there to the fire and letting the dance dance me allowed me to move beyond my negative stories of self. But how to continue to embody the knowing that flowed through me at that moment after the retreat is another story. It is the story of “integration” that is also central to the narratives of Western psychedelic science because it is expected to make the ephemeral nature of psychedelic experiences and the insights they reap more enduring. How can the panther stay with me without becoming a tamed creature? This contribution is a story of wild animals, their encounters with civilizing forces, and the ecologies in which they dwell.

GOVERNING SUBJECTIVITIES

During the past century, psychedelics have moved from promising research drugs, CIA-investigated potential mind-control technologies, means to raise and liberate consciousness during the 1960s counterculture, to being placed into the government-defined taboo category (Schedule I) through the Controlled

Substances Act in the US (1970) and the UN Convention on Psychotropic Substances (1971). Taboo here means: No currently accepted medical use (even under medical supervision) and a high potential for abuse. The Psychedelic Renaissance currently sweeping across Europe, the United States, and other industrialized countries is driven by the aim to challenge this taboo and to bring psychedelic substances legally back into society. The contingency of societal assessments of drugs and the associated laws is made visible through historical studies that show how drugs follow specific careers that tend to move from phases of enthusiasm, therapeutic hopes, critical assessment, to restricted use—and then often cycle back again (Richert, 2018). Psychedelics have re-entered the cycle. We are standing at the brink of another shift in how Western societies use and understand psychedelics. Yet in how far this shift could reconfigure the ecosystem of subjectivities, and as a consequence induce broader social change is up for debate.

Proponents of cognitive liberty, who inhabit the psychedelic space and have been central among the initiators of the Renaissance, claim that on the basis of human rights it is unjust to restrict access to mind-modulating substances. In such a framework, the right to chemically or otherwise achieved modification of one's subjectivity should not be infringed upon by laws. Modern societies govern themselves in ways that delimit available subjectivities from undesirable ones, for instance by rendering some mind-modulating substances such as psychedelics completely off-limits and allowing others for consumption, usually within certain bounds. I use the term subjectivity here in the sense of experiencing a sense of self and one's place in reality that can either be generated by being subjected to outside control and dependence as well as emerge from within through self-knowledge, as the late Michel Foucault (1982) put this dual constitutive process.

SCIENCE AND SUBJECTIVITY

The factors that shape drug cycles are a complex web of medical-scientific, economic, socio-cultural and political ones—never just what is considered “objective” scientific facts because scientific facts are intrinsically tied up with the socio-political milieu in which they are produced. Scientific objectivity represents an intersubjectively produced subjectivity that lends credibility to certain observations and statements about the state of the world and its components. Scientific (inter-)subjectivity as a credibility creator is also what is mobilized in attempts to relegitimize psychedelics. In addition, contemporary psychedelic researchers seek to enact the subjectivity of the sober scientist in their public performances in order to delimit themselves in an antithetical move from problematically perceived first-generation psychedelic researchers such as Timothy Leary (Giffort, 2020). Speaking publicly about own subjective experiences with psychedelics is no longer part of an acceptable psychedelic researcher's subjectivity performance, while many researchers would admit in private that their scientific explorations are indeed driven by own experiences

and visions for how psychedelics might impact the world from the ground (that is consciousness) up. By starting this contribution with a recounting of my own experience of drinking San Pedro cactus tea during a ceremony at a retreat center in South America I aim to transgress this taboo of subjectivity in science (Wallace 2000). Of course, breaking this taboo is easier for a social scientist like me who is studying the re-emergence of psychedelic research from a meta-level than for those researchers who are bound by standards of objectivity in clinical trials that are necessary to usher psychedelic substances officially through the gates of regulatory agencies in the Global North.

TRANSGRESSING THREE TABOOS

From Northern scientific labs to Southern shamanistic rituals, psychedelics tend to appear as psycho-spiritual-social technologies (and much more) with the potential to alter subjectivities if intention and the socio-cultural setting are set in the right parameters. Psychedelic technologies hold the potential to transgress at least three societal taboos. First, the taboo against knowing who we are (Watts, 1989/1966). This taboo stabilizes human beings' misidentification as limited bodyminds separate from other humans, animals, nature, and the mind@large (Ascott, 2000). It produces isolation and boundaries. The resurgence of research with psychedelics highlights the importance of mystical-type, self-transcending experiences for fostering psycho-spiritual healing. These experiences can be characterized by feelings of oneness, a loss of one's usual sense of self (ego-dissolution), or by encounters with spirits and other non-ordinary beings, to name just a few possibilities. No matter whether self-transcendence appears in non-dual or dualistic versions, both types tend to lead to a deeper knowing of self and world that runs counter to the modern materialist paradigm.

The second taboo psychedelics can help to transgress is the taboo of subjectivity in science that I already trespassed above. It relegates the experiential, subjective to the fringes and judges individual first-person experience as less truthful than "objective" knowledge. This taboo hides that science is also fundamentally a social endeavor in which values and norms play a central part rather than detached epistemic exploration, as research in science and technology studies has been showing for decades (for an early study in this tradition see Latour & Woolgar, 1979). Psychedelics can reveal the constructedness of concepts and that subjectivity and social construction is underlying what is built as "objectivity."

Third, psychedelics may also be used as tools to transgress the taboo of questioning and challenging authority that guards hierarchical power structures by prescribing norms and rules of conduct from "above." Psychedelics are empowerment tools—and they have fueled the activities of the 1960s counterculture that notoriously questioned authority; a stance particularly espoused by its "high priest" Timothy Leary. In line with this cultural tradition, research at Imperial College London has indicated that lifetime psychedelic use correlates with liberal political views and negatively predicted authoritarian

political views (Nour et al., 2017). These findings sparked great enthusiasm among left-leaning, counterculturally-rooted psychedelic advocates, but the reality is also that psychedelic technologies do not produce left-wing subjectivities by default. This reckoning with ideological “outliers” in the psychedelic space has become more palpable since the far-right conspiracy theorist Jake Angeli, known as the QAnon shaman, stormed the US Capitol with other pro-Trump supporters in January 2021. His example also shows that transgressing some taboos and giving up on a certain “consensus reality” can have dire consequences for individuals and societies if these transgressions are built on a questioning of the democratic order and a disregard for its institutions.

RECONFIGURING THE ECOSYSTEM OF SUBJECTIVITIES

How can we then think of the role of psychedelic technologies in reconfiguring the ecosystem of subjectivities? What added dimensions can an ecological perspective provide here? Subjectivities are always part of an ecosystem that is formed by the interactions between all living and non-living things within it. An ecological perspective accounts for the fundamental interdependency of humans with their environment, moving in a psychedelic manner beyond the first taboo mentioned above that imagines the modern self as an individual in opposition to other selves and the material world or nature. The concept of the ecosystem sensitizes us to the interactions between species and other elements and processes in a particular habitat. In an ecosystem relationality is key to maintaining its balance.

Natural ecosystems are balanced systems in the sense that the interactions between the different organisms that make up the ecosystem are essential for its stability. While ecosystems are also characterized by dynamic processes that are constantly changing, human interventions within them often entail unexpected cascade effects on the whole. A prominent example for this phenomenon is the US Yellowstone National Park, where wolves—and other species labeled as “predators”—were killed off in the 1930s to assist the survival of the elk population. The rebounding elks, however, started to browse too much on the willows, which the beavers then lacked for their survival in winter. An article on the Yellowstone Website¹ from June 2020 explains that the reintroduction of the grey wolf into the ecosystem in 1995 had a huge effect on the beaver colonies in the park, allowing them to grow from one to nine. This flourishing beaver population is just one of the positive effects of the wolves’ comeback. The ripple effect is ongoing throughout the ecosystem of the park.

We could imagine psychedelic substances and the subjectivities they help to unearth and create as the wolves in the human ecosystem of subjectivities. They were stigmatized as predators in the 1960s by claiming that they would prey on the sanity of human populations, inducing moral decline and turning

¹ Farquhar, B. (2021, July 1). Wolf Reintroduction Changes Ecosystem in Yellowstone. *Yellowstone National Park*. <https://www.yellowstonepark.com/things-to-do/wildlife/wolf-reintroduction-changes-ecosystem/> (accessed: 15 March 2021).

social order into chaos. Through this framing psychedelic substances have been entangled with the countercultural subjectivities of the 1960s, but as mentioned above, this is no longer or has perhaps never been the case. As the former advisor of Richard Nixon, John Ehrlichman, admitted in an interview referring to the reasons that drove the creation of the drug scheduling system in 1970 and the concomitant illegalization of psychedelics and other mind-modulating substances: “We knew we couldn’t make it illegal to be either against the war or blacks, but by getting the public to associate the hippies with marijuana and blacks with heroin, and then criminalizing both heavily, we could disrupt those communities. We could arrest their leaders, raid their homes, break up their meetings, and vilify them night after night on the evening news. Did we know we were lying about the drugs? Of course we did.” (quoted in Baum, 2016, 22) While he didn’t mention psychedelics specifically, they were similarly associated with the hippies. Just like the wolves in Yellowstone that did not have the label “predator” written upon them, psychedelics did not have the word “enemy” attached to them but rather by attaching them to subjectivities that the authorities wanted to control, they were made into the proxy through which this control could be achieved more subtly.

The reintroduction of psychedelics now opens up the possibility to observe similar cascade effects in the ecosystem of subjectivities, although we cannot predict what they will be. Arguments for cognitive liberty, that are rooted in the idea of an autonomous individual with its rights, could be expanded with an argument for the overall flourishing of the ecosystem of subjectivities that needs the free expression, participation and interaction of all subjectivities, substance modulated or otherwise, to remain in balance. Accompanying this process of reintroduction with harm reduction measures—be it in clinical contexts, shamanic ceremonies and “in the wild”—is considered to be a central component in avoiding what is often described as “bad outcomes” and ensuring balance. In the Psychedelic Renaissance, there exists broad consensus that some control and structuring of psychedelic experiences will be important to secure the safe use of psychedelics in contrast to the *laissez-faire* approach that reigned in the 1960s.

CAPITALISM CAPTURES PSYCHEDELICS

But there is another pressing question that the Psychedelic Renaissance is confronted with at this point in time: will psychedelics assist in breaking the three taboos and be able to reconfigure the ecosystem of subjectivities if they become smoothly reintegrated into existing socio-economic structures instead of acting as countercultural forces?

The dreams of psychedelic left-leaning enthusiasts are in the process of encountering and merging with the productive desire of the 21st century capitalist apparatus of capture (Deleuze & Guattari, 1988) that has already begun to incorporate psychedelics. The psychedelic space is attracting large amounts of investments and a plethora of corporate actors. In early 2021, 52

psychedelic companies populate the scene, waiting to profit from the so-called shroom boom; and the stocks of half-a-dozen of them are rising on optimistic research results and hopes for regulatory approval². Given this reality, I propose that the specter haunting contemporary psychedelic culture is no longer Timothy Leary, as Giffort (2020) has diagnosed, but the spirit of capitalism trying to possess and thereby reshape the re-emerging psychedelic assemblage and the subjectivities emerging from it. The likelihood of impending commodification and commercialization through the route of the psy sciences frightens those who cling to a countercultural psychedelic vision that seeks to change the mainstream rather than become a streamlined part of it. Or put differently, the reintroduced psychedelic wolves are in danger of being captured again. This time the societal control strategy is not focusing on extinguishing or confining but on taming, turning the wolves that could tear down the existing societal order into sheep of capitalist market structures.

As Isabelle Stengers (2008, 55) has pointed out: “The question around an event of capture is always the question of what the capture process depended upon and exploited.” The psychedelic community that has ushered in the Psychedelic Renaissance was building its activities on the hope that psychedelics can be smuggled into society in the Trojan horse of science to then transform the system from within. The Trojan horse here works also as a sort of sheep’s clothing. But the reality that many are waking up to is that once the horse opens the subjectivities of the people in the horse get captured by the appeal of the new surrounding they find themselves in. In other words, psychedelic substances are never lone wolves in the Trojan horse: they are attached to human beings. Once out of the horse, the psychedelically-attached subjectivities might discover that they underwent an ontological transformation as they start to mingle with entrepreneurs and investors whose glimmering check books promise a fast track to realize their psychedelic dreams. Yet the dreams are changed in the process of being attached to capitalism. The capture process here exploits that subjectivities are never fixed but malleable. The main issue with the Trojan horse imaginary guiding important pockets of psychedelic science today is that psychedelics are conceived not as the nonspecific amplifiers (Grof, 1980) they are but as preconfigured technology just waiting to release its inherent paradigm-shifting power onto society.

It is not hard to imagine how capture will look like if we turn to how the capitalist specter haunting psychedelics has already caught meditation and yoga in the West. Buddhist meditation was stripped from its spiritual-ethical teachings and funneled into a secular mindfulness package sold as an individualistic, stay-in-the-moment tool to regulate emotional responses with no broader sociopolitical ramifications (Purser, 2019; Rose, 2007). Mindfulness serves as a perfect technology for neoliberal subjectivities that strive to find

2 For more information check *Company Database | Psychedelic Finance*. (n.d.). <https://www.psychedelificfinance.com/companies> and Ali, A. (2021, January 7). *Why Investors Are Psyched About Psychedelic Stocks*. Visual Capitalist. <https://www.visualcapitalist.com/investors-psyched-about-psychedelic-stocks/> (both accessed: 7 January 2021).

well-being, inner peace, and happiness while they continue to participate rather than to change the economic structures that make them unwell in the first place. Psychedelics have already been co-opted by the wellness industry. The most evident example is that Gwyneth Paltrow's lifestyle company, Goop, has devoted a whole episode of their Netflix series to showing how their staff tripped at a magic mushroom retreat in Jamaica. And more is to come.

REWRITING THE PANTHER

The Panther

*His vision, from the constantly passing bars,
has grown so weary that it cannot hold
anything else. It seems to him there are
a thousand bars; and behind the bars, no world.*

*As he paces in cramped circles, over and over,
the movement of his powerful soft strides
is like a ritual dance around a center
in which a mighty will stands paralyzed.*

*Only at times, the curtain of the pupils
lifts, quietly--. An image enters in,
rushes down through the tensed, arrested muscles,
plunges into the heart and is gone.*

Rainer Maria Rilke (translated by Stephen Mitchell)

Was my retreat in Ecuador already part of the new psychedelic wellness regime? There also were hot tubs on the grounds and a lot of other amenities like delicious vegetarian food, as well as yoga and meditation classes. I got a little reconfiguration of my subjectivity for a while at least. But at the time of writing, which is one-and-a-half years later, I wonder whether the effects of empowerment which I felt then and there have endured. Life—with its hard lessons and economic pressures—still feels confining. Like for Rainer Maria Rilke's panther, the curtain of my own panther pupils was lifted for a moment. But I still ask myself: Have I been tamed and do I still live behind bars? There is no easy answer to this question, but the answer changes with the focus of my vision. I still recall the image that entered into me during the ceremony, which conveyed that it is in our hands to remove the bars, so our gentle paws may touch the ground of Salvador's land. If we are to rewrite *The Panther* we have to realize and act on the realization that we are the panther, the cage, its builder, maintainer, and the world beyond it.

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Transcending the Human: Mnemo-Media, Creativity and Impairment from Human to Hyper-Human

ABSTRACT

We live in a digital era, a period when the technologies to preserve our memories and enhance our humane bodies are developing at a fast pace. The author's research project explores concepts of normality, memory, body, translation, and representation. Art is a powerful tool to enhance public awareness of several disorders and cognitive difficulties, questioning norms of behaviors and normality. Does losing our memory means becoming simultaneously visually/audio/motor/self impaired? In the age of neuroenhancement are we (will we, the organic humans be considered) all impaired? Will we transcend humanity with enhancement? By being present in her practice-based research at clinical trials with Alzheimer's disease patients the author has enlarged her humanness, which surfaced, into my artwork. She concluded that her embodied presence/looking at scientific/medical practices was powerful, leaving behind traces of her experience and new meanings. Different complementary technologic and medical fields may lead to far more powerful ways to expand human powers, augment human capacities, but the author wonders whether they enhance and transcend human lives. The complexities of memory functioning and enhancement, its loss and the intricacies of its research have surfaced in the author's installation-art and will be discussed along this paper.

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KEYWORDS Arts-based Research, Human Enhancement, Art/Science, Memory, Transcendence.

INTRODUCTION

Does losing our memory mean becoming simultaneously visually, audio, motor and self-impaired? In the age of neuroenhancement are we (will we be considered) all impaired? I argue that artists can raise awareness of these factors through their interpretations, their construction of aesthetic experiences and provocative actions.

My previous research/projects have shown that our fragmented reminiscences and relationship to objects, language and knowledge are characterized by paradox and challenge in a permanent search for meaning. As a result, it is possible to address the notion of wholeness and memory functioning via interaction through art installations.

In the practice-based PhD research on the Representational Strategies on Alzheimer's Disease, through self-examination and montage strategies I developed the ability to identify certain almost-universal human flaws and slippages, and recognized memory's powerful association with attention/narrative/habit. I gained a deeper understanding of the implications and possibilities that surround the acquisition and maintenance of memory and its potential enhancement, as well as ideas to pursue new artistic/research explorations.

I found visual plasticity, narrative and metaphorical richness, in the neuropsychological dementia assessment materials and in laboratory representational strategies (Latour, 1987); allowing translations and simultaneously evoking absence/presence (blots and gels instead of cells, cells instead of brains, diagnostic images instead of the patient's body). I will use as example *The Assessment*, one of the projects developed during the time frame of the research, to demonstrate my meanings.

MEMORY AND ALZHEIMER'S DISEASE

Memory, according to Nunes (2008) is understood to be fundamental to the constitution of the self /understanding of the world working in tandem with external archives and aids of memory ranging from personal mnemonic objects (e.g., cell phones, computers) to collective, social/public memory (e.g., gardens, museums).

Memory is a multiple system; as Tulving and Craik (2000) claim, it implies a group of different abilities mediated by distinct brain systems. Each neural system holds differing connections and receives different information from distinct brain structures; to create a unified experience of memory.

In neuropsychology, when a test is performed on a patient's memory, the meaning associated with memory is, the process of encoding, storage and retrieval. As Kandel (2006) asserts, the act of remembering, in neural terms, is described as a network of connections among nerve cells.

Human memory is complex, fragile and defines our individuality. We mentally store our experiences and knowledge of the world as memories. However, memories are easily forgotten, and its retrieval, through the act of remembering, is inexact and faulty. Subjectively, it is understood that memories are mediated,

personal and subject to change, rather than a fixed archive of pristine data awaiting the appropriate command to re-form them into images.

Memory is a complex construction, a biological phenomenon rooted in the senses, that begins with perception and actively utilizes many areas of the brain to reassemble a thought into a coherent whole. Different types of memory are stored and evoked using diverse neuronal networks located in distinct parts of the brain. Memories, therefore, consist of an association between groups of neurons that triggers other associations to create specific patterns. I propose that this process in a multiplicity of systems implies a tendency to assemble, and may be evoked through montage, juxtaposition and video installation. In Alzheimer's disease communication within this system seems to be disrupted; the assembling capacity therefore seems to be shattered.

Alzheimer's is a silent, neurodegenerative disease that effaces the map of connections drawn from the experience of living; its onset is heralded by destruction of autobiographical memory. According to neuroscientist André Dellacourte (2006), Alzheimer's disease is the most common form of dementia, a brain pathology that leads to a progressive cognitive decline in the ability to remember, learn, think and communicate. Sufferers present difficulty accessing and using words, recognizing faces, images, places and objects. It is a complex phenomenon, due to the coexistence of two degenerating biological processes, tau protein aggregation and Beta-amyloid deposition, that affect polymodal association in brain areas (*i.e.* synapse networking). The progressive loss of brain network connections inhibits patients from assessing not just recent events, but well-rehearsed skills and known facts:

It is not just about remembering things, claim DeBaggio (2002: 199) "it is about where things are and how they work. It is about the retrieval of knowledge; it guides speaking, sleeping and rolling in the grass".

As Joan Gibbons (2007) claims that art became an important agency to the memory-work required by contemporary life and culture by challenging ontological assumptions that underpin much recent research on memory, including understandings of biological memory, and the role of its enhancement.

HUMAN ENHANCEMENT

Significant developments in perceptual aids for people with disabilities may offer a glimpse at an entirely different future. Research in Cochlear implants, and Artificial Retinas are some of the most recent technological developments to suppress deficiencies in hearing and sight. Both are considered to be therapeutic forms of human enhancement providing the means of overcoming a perceived disability. Near-future technologies could give rise to people who are able to perceive a wide range of stimuli previously invisible or inaudible. Human enhancement may include any activity by which we improve our bodies, minds or performances, but according to Daniels (2000) the controversy starts when these improvements are considered to boost our capacities beyond the statistically normal range of functioning for an individual.

As Clark et. Al (2014) claim Humans have long used several cognitive enhancement methods to expand the competence and range of the various mental activities we perform. Neuroenhancement, according to Clark et. Al (2014), describes the use of neuroscience-based techniques for enhancing cognitive function by acting directly on the human brain and nervous system, altering its properties to increase performance (....) This includes transcranial electromagnetic stimulation methods, such as transcranial direct current stimulation (tDCS) and transcranial magnetic stimulation (TMS), along with deep brain stimulation, neurofeedback, behavioural training techniques, and these and other techniques in conjunction with neuroimaging.

The methods described above and others cited by Eduard deBono Foundation, such as lateral thinking or creativity, or many well know smart drugs promoted by pharmaceutical companies and advertisements, or even coffee, can be used to improve perception, attention, memory, creativity and other forms of cognition or reduce the costs and duration of treatment in specific pathologies. In this view, neuroenhancement implies operating directly on our nervous systems, to improve our cognitive function and increase our capabilities.

Hub Zwart (2013), resumes the scholarly debate around the themes of neuroenhancement referring post-humanism, bio-conservatism and the work of Peter Sloterdijk as the most important examples. Until recently the debate was polarized between the authors in favour of a complete technological remake of our human capacities (trans and post humanists), and the opposed defenders of the natural evolution (bio conservatives). Zwart (2013) draws attention to Francis Fukuyama (2002) concerned evaluation of the possible alterations of the brain as matter and the human personality by the intake of the future genomically targeted neuropharmaceutics. Peter Sloterdijk places the debate in a different platform considering the will to self-enhance as typically humane condition and analyses this history of 'self-improvement' in a broader historical perspective extending Nietzsche and Foucault's views on our dependence of self-improvement. BrüSeke (2011) asserts that Sloterdijk emphasizes de role of exercises, defending arts and culture as systems of examples to transpose from one generation to the other important cognitive and moral content for their survival and Zwart (2013) calls attention to our neurological plasticity and the way our brain networks are "sculpted by our socio-technical environments.

THE ASSESSMENT

Alzheimer's patients gradually lose the ability to comprehend narrative structure and the chronological time systems (*i.e.* contextual memory –Nunes, 2008) that orient our personal autobiographical memory system. Lacking an almost permanent translation of the world, it becomes difficult for them to function. Though attended by caregivers, doctors, nurses, family and friends, their shattering neuronal and cognitive condition threatens to dissolve connections with the world and to exile them in that fundamental solitude of the sick and

demented. Gradually, as forgetting details extends to loss of concepts, they not only forget how to read or write but cannot understand the significance of a book or a pencil, in speech, written word, image or even as an object. Further, interpreting space and moving becomes difficult and threatening.

During my research I submitted myself to three neuropsychological assessment tests (MMSE, ADAS – Cog and NTB) similar to those undergone by patients followed during a clinical trial for a new therapeutic drug. The act of being assessed, whether myself in the studio, or a patient in the laboratory, is an intimate action, performed with an economy of means.

The Assessment (Image 1) is a double split-screen projection of four simultaneous video narratives: the condensation of an extended exploration of different actions, moments, locations, and materials. When placed in sequence and presented together, the fragments of video establish previously invisible links that approach the separate actions and construct bridges, transforming what was an invisible link (such as a whistle that later identifies the protagonist) into a necessary narrative. The idea of assessment is transposed from the content and context of the images to the negotiation between viewer and multiple viewpoints, *i.e.* multiple simultaneous projections, implying a heterogeneous outlook. The multidimensionality of the installation and the fragmented experience of the viewer becomes the representation of multiple layers of memory and meaning, in a constant interrelation between the external experience and its internal reality.

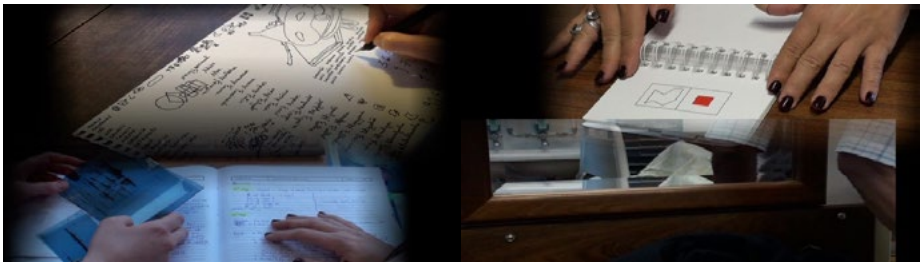


Image 1. Maria Manuela Lopes, 2011/12, *The Assessment*. Video stills, screen a and b.
©MariaManuelaLopes

These articulated fragments of memory and fragmented bodies, mainly hands and representations of the body, aim to change the path of our understanding of the construction of autobiographical memory and identity from a basis in lived or observed experience to a witnessing process of permanent reconstruction – or, in the case of patients, to an increase in the gaps and silence and absence.

The evolution of *The Assessment* stems from the emotions I experienced during the diagnosis and follow-up procedures of Alzheimer patients, and from

reflection on the data I captured in the molecular biology laboratory plus those I was producing in the studio by a mimicking strategy.

Once diagnosed, Alzheimer's patients become trapped in a semi-visible network of assessment strategies; they surrender to the vigilance that surrounds their condition and become observed – hence the panopticon metaphor by Foucault (1995) – by everybody, all the time (Image 2). The institution constitutes the medical and scientific archive by producing endless chains of inscriptions and actions, as noted. Outside the institutional frame, friends and relatives silently observe every mood, move and sentence to identify growing flaws. The most frightening observer is the patient himself, the one that apparently has transcended comprehension.



Image 2. Maria Manuela Lopes, 2011/12, *The Assessment*. Video stills, screen a and b.
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The installation unsettles conventional representations of the loss of memory, and also unsettles viewing relationships. The audiovisual work offers ways to negotiate individual memory loss, and explore scientific practices for investigating this process. My visual strategies in postproduction incorporate editing grammars, strategies such as fractures, slow motion, mute moments or repetitions, which engage the viewer in an emotional affective reaction. I intend to draw viewers into the process of memory and remembering without relying on their identification with the theme, but allowing through experience and feeling an engagement and intellectual reflection.

Art is a powerful tool to enhance public awareness of several disorders and handicaps (such as visual, sound, or motor impairment) and also cognitive difficulties (such as attention) and question norms of behaviour and normality. My collaborative art/science research projects are discursively located within the paradigms of memory, life sciences and visual arts. Within the process it allows the boundaries between aesthetics, philosophic and scientific disciplines to become significant in a relational network associated with the themes of remembering/forgetting, presence/absence, and concepts of self-identity.

The work developed (Image 3) explore/expand on the representational strategies of memory studies in the laboratory through art practice, alluding to the complex, fluid and multiple nature of memory and the studies on its functioning/

dys-functioning and enhancement/preservation. The pathways explored involve the production and dissemination of art installations and contact with different audiences in the form of workshops that experiment with traditional mnemonic techniques, augmented reality and cognitive stimulation strategies, that promote a network of artistic, scientific, scholarly, poetic, technically and methodological layers and further questions.



Image 3. Maria Manuela Lopes, 2011/12, *The Assessment*. Video stills, screen a and b.
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CONCLUSION

The art projects and research have explored the dynamics of the encounter between diseased bodies, institutionalised scientific practices and diagnostic images, focusing on the enactment and re-enactment of the originating performances, their experiential sensory qualities and their power to address the subject of memory. These findings have been extended into cultural, social and political contexts by contrasting them with other ‘realities’ and private/public cultural practices.

As an artist I close the loop by feeding back into the wider culture – if not with an explicit revelation of the kind for which scientists strive, at least with a willingness to contemplate new forms of knowledge. This is to be achieved using visual and sound languages that are not explicitly bound by the laws of empiricism and logic, but are rather strategies that emphasise play, dialectics, drama, humour, and ambiguity as paths to evoke autobiographical memory. As an artist in residence I may not be able to exert substantial influence, but the challenge to expose concerns to a broad audience is a major motivational factor in the production of my research, eliciting a change of attitude in an audience. I emphasize that the installation works embodies the power to communicate complex scientific and human concerns through art, and demonstrates the strength of using aesthetic strategies to present complex notions of disease, memory, archiving, clinic diagnostic and treatment or therapies. The new projects explore how we take for granted human enhancement methods from the eyeglasses or the motorbike, to the cell phones or tea and shiver when hear words such as nanorobot, gene-therapy or cyborg. By being present at the installations the questioning around the technology transcending the human or

the body becoming obsolete should arise. Visual arts, may and should contribute to fuel the debate on body, cognitive and memory enhancement extending the public interest beyond the existing scientific research on bionic limbs or cosmetic surgery or speculations on the bio-ethical grammar, of permissions, policies or rules for research and on whether to and to what extent individuals will be allowed to make autonomous and informed choices and how to minimize risks and harmful consequences.

Arts research may play an important role in making visible the implications of new technological developments as well as may use its freedom to provide possible scenarios for exploration of enhancement possibilities in a near future; reflecting on the current technologies and techniques impacting on society, or anticipating the social changes to come (as the consideration that normal now may be handicap tomorrow) foreseeing the pressure ordinary people will suffer to undertake 'smart drugs' and specific therapies to enhance their natural capacities and increase their performance.

How will the social, political, legal, and moral landscape, therefore aesthetics, change due to pressure from reasonably expected advances in science and technology? Will the availability of techniques that can enhance performance impose new concepts of normality, impairment or even Humanness? In a period when sensual augmentation become normalized, those who decide not to augment their perceptual capabilities may become regarded and treated as "disabled". With the possibilities of a future that aims to exclude the deficit of sight, hearing, motor limitation, memory and cognitive impairment, I wonder and explore if the glitch, the uneven, the contingency or imperfection of or bodies/ minds /performances aren't the poetic side of life that makes us truly unique as individuals.

My projects encourage the public to be critical about adjudications of health/ illness by providing viewers with a way to experience the limitations of normal perception and memory. Spectators are invited to reflect on 'normality' and to what extent our notions of the perceiving, remember or the norm are socially constructed and technologically embedded.

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Ancient Myth and Bio Art: Artistic and Genetic Transformations

ABSTRACT

Tales and ancient myths often refer to the concept of transformation. Notably, many ancient Greek myths use transformation as a solution to a problem; as *katharsis*, according to the ancient Greek term. Such is the case of Baubo's myth, which is closely associated with mysteries in ancient Elefsina and goddess Demeter. Vavo was an old servant who managed to make the goddess laugh, when the first picked up her dress and showed Demeter her genitalia and her pregnant belly. Apart from this myth, there are also many ancient Greek sculptures depicting this scene. Baubo's myth and its artistic representation is a message of life to Demeter's mourning for her daughter Persephone who was kidnapped by Hades. Theoretical sciences, such as psychoanalysis and philosophy, have often based their new theories on ancient myths. But how is genetic science and, therefore, bio art with this particular ancient Greek myth? Furthermore, is bio art associated with ancient Greek myths and their representations and, if so, in which way? This paper examines the case study of Baubo's representations in relation to bioart and genetic science. More specifically, the works of bio artists, such as Patricia Piccinini's and Jalila Essaïdi's, will be investigated together with genetic science's accomplishments regarding the issue of the evolution of the human life, as well as the birth of a new life, as Baubo's myth preannounced.

KEYWORDS: Myth, Bio Art, Genetic Science, Transformation, Life.

INTRODUCTION TO BAUBO'S MYTH

This presentation addresses the relationship between myth and reality, as expressed in art. More specifically, I selected an ancient Greek myth that refers to goddess Demeter's encounter with Baubo, and artworks that explore birth and evolution, by Patricia Piccinini and Jalila Essaïdi respectively.

According to the anthropologist Bronisław Malinowski, there are two realities, the historical and the mythical, each with its own rules and logic. However, one coexists and complements the other (Malinowski, 1984: 193-206). Roland Barthes emphasizes that myth is a mode of signification, a form to which we assign historical limits. What plays a role among the mythological themes is the cycle of life, the passage from life to death and from death to life (Barthes, 1991 :110-119).

This theme can be found in Persephone's myth, which is associated with the Eleusinian mysteries. In Persephone's myth, Baubo was an old servant of the king of Eleusis. According to the Orphic myth, goddess Demeter arrived in Eleusis, looking for her daughter, Persephone, who had been kidnapped by god Pluto, the ruler of the underworld. There, Baubo welcomed Demeter and offered her a special drink, kykeon. At first, Demeter did not accept the drink, on account of her mourning. To make Demeter laugh, Baubo lifted her dress and revealed her ugly naked body, particularly her belly and vagina, from which lacchus came out laughing. That made Demeter laugh and drink the kykeon, a drink made of broad beans (Kerényi, 1998: 228-229.)

Baubo's myth reflects the ontological reality and an existential question, since Demeter's pain for Persephone's abduction is eased by the birth of lacchus. It is important to mention that, in ancient Greek, the word "Baubo" meant belly (Hesychius: vv. 296) and that lacchus was thought to be the holy child of the Eleusinian mysteries and Persephone's son. Let us see, now, how Baubo is represented in ancient Greek sculpture (Olender, 1990: 83-113).

BAUBO'S FIGURINES

The clay figurine from Samos [Image 1], which dates back to the 3rd century BC and is only 13 cm long, depicts the lower half of a naked female body. Her head is in the position of the abdomen, above the vulva. Only the hands can be seen from the upper body: the right one being raised and the left one holding a fruit basket. A wide, smiling face is depicted in the abdomen. The forehead is framed by hair that covers the entire head (Tsakos & Giannakopoulos, 2014: 243-244).

It becomes apparent that the anonymous artist wanted to reveal pregnant Baubo's womb and emphasize her fertility by focusing on the interpretation of the word "Baubo" as a belly. However, what is even more impressive is the Image itself, which reminds us of a surreal image. Let us remember René Magritte's "Rape" [Image 2], since in ancient Greek art one can rarely find surrealistic representations.



Image 1. “Baubo”, 3rd century B.C., clay,
Samos Archaeological Museum
Image source (Η Βαυβώ Εξομολογείται, n.d.)

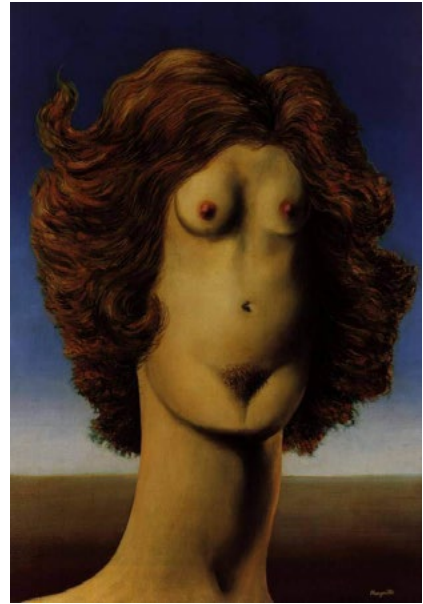


Image 2. René Magritte, “Rape”, 1934, oil on
canvas, Menil Collection, Houston
© The Estate of Rene Magritte, image source
(The Rape [René Magritte] [1934], 2022)

In other words, we can argue that what the artist was mainly interested in was not the representation of a shapely body, nor even a realistic representation of the naked female body, but, instead, the representation of reproduction as a reference to biology. That is why, by using their experience rather than a geneticist’s scientific knowledge, the artist depicts Baubo’s belly as an inverted mirror. In this pre-scientific conception of birth, the artist’s imagination invents an archetypal image, a superhuman. Although it was created such a long time ago, Baubo’s sculpture can form a dialogue with the contemporary aspirations and achievements of genetic biology and biomedicine. Let us not forget that the first component of the word “biology” comes from the ancient Greek word “bios” which means “life”. It is a science of life, while the sculpture celebrates the creation of life.

Furthermore, the fruits, in Baubo’s basket could also be a reference to the fruiting of Earth. On the other hand, Baubo was a deity of the Eleusinian cycle, like Demeter and Persephone. This is also proved by a votive inscription, on a tombstone, which mentions Menekrete as a priestess of Baubo (Pantermalis, 1977: 335-336).

In another figurine, found on the Acropolis of Gela in Sicily, Baubo is depicted in a moving motion capturing the moment when she lifts her tunic and shows her vagina [Image 3].



Image 3. «Baubo», 450 B.C. (Lentini Maria Constanza, 2005: 213-215)

Sigmund Freud, who had seen similar figurines of Baubo, associated the move with the illusion of a patient who saw a head in the position of his father's genitals (Freud, 1916: 338). According to Larissa Bonfante, in her article "Freud and the psychoanalytic meaning of Baubo's gesture in ancient art", this powerful gesture relieved Demeter's pain of losing her daughter by shocking the goddess and making her laugh (Bonfante, 2008: 2-9). Charles Picard, explores the same issue in his article, "L' épisode de Baubô dans les Mystères d' Eleusis" and refers to the sacredness of Baubo, identifying it with *Baubon*, a word that means phallus. Consequently, the word refers to the man who played the drums at ceremonies in honor of Demeter (Picard, 1927: 221-255). Respectively, Pepi Rigopoulou emphasizes that the movement of Baubo is not a gesture of exhibitionism, but it highlights the sanctity of vaginas in Greek antiquity, as they function as mirrors of an invisible and unexplained spectacle (Rigopoulou, 1994: 47-51).

But what is the relationship of Baubo, both mythical and artistic, with bioart? We could take as a given that the artist is influenced by the social, historical and cultural context, as he has an experiential relationship with it. On the other hand, artistic creation has an impact on society, as it carries fundamental values (Gemtou, 2008: 199-217).

In the context of this reciprocal relationship, in the history of art we distinguish many instances of dialogue between art and science. In the Renaissance, artists already used to apply the rules of projection geometry to render the perspective of space. In fact, with the emergence of modernism, artists adopted the scientific method of experiments with the aim of highlighting the visual and, more broadly, the aesthetic quality of the work of art, as well as the constant search for the artistic possibilities. At the same time, the science of psychoanalysis was a field of reference for surrealists. In the twentieth century, we find the term *artists in residence*, which refers to artists who work with scientists in the laboratories, transgressing the distinct boundaries between scientific and the artistic labs. However, since the end of the twentieth century, many artists have been collaborating with scientists on a research level, even using the same media.

BIO ART AND “BIG MOTHER”

A special relationship between art and science is created at the end of the twentieth century, with the evolution of biology and the discovery of DNA. This new ability of scientists to study genetic sequences and to intervene in the formation of living systems has attracted the interest of many artists, who have discovered new ways of artistic expression from the achievements of genetic science or raised bioethical issues and criticized their works. In fact, there are many artists who are trained in scientific practices, in order to create works in which art and science become intertwined. The discovery of the inherited transmission of genes from generation to generation intensified the interest of these artists in the sciences and their role in human's life and the world around them (Gemtoui, 2018: 269-277).

The anonymous artist who captured the main scene of Baubo's myth, in which she gave birth and revealed her vulva, did so at a time when art was highly related to worship and religion, instead of science, played a key role in interpreting the cycle of life. However, as the life-death dipole has not ceased to concern the human mind, it is interesting to explore the affinities between the figurines representing Baubo and bioart works of similar representations.

To this end, I selected works by two women artists, Patricia Piccinini and Jalila Essaïdi. I selected a female artist, despite the fact that Baubo's creator was probably a man, since Baubo herself was a woman: a woman who communicated a woman's issue to another woman, Demeter. “Big Mother” by Patricia Piccinini is a part of the exhibition “Fairy Tales, Monsters and the Genetic Imagination”. It is a composition of 1.75, made of silicone, fiberglass, leather and human hair depicts a humanoid female Image, reminiscent of prehistoric homo erectus, yet too tall for its time. While her body, particularly her chest and hair, are humanlike, her face, back and body posture remind us more of a baboon. She holds a breastfed baby in her arms. Sadness is reflected in her eyes (Big Mother, n.d. [Images 4 and 5]).



Image 4. Patricia Piccinini, *Big Mother*”, front © Patricia Piccinini, Image source (Mediaartresearch: Key_Details, n.d.)



Image 5. Patricia Piccinini, *Big Mother*”, back © Patricia Piccinini, Image source (Mediaartresearch: Key_Details, n.d.)

According to the artist, the work was inspired by an African myth: “the story of a baboon whose infant died while she was nursing and who then abducted a human child as a substitute” (Science Meets Art | *Big Mother*, n.d.).

BAUBO AND “BIG MOTHER”

One of the features that reminds us of Baubo’s is both the realistic and unrealistic details of the scene: the hybrid face of the baboon-woman, as well as the unrealistic image of a human baby being breastfed by a baboon, can be compared to the laughing baby emerging from Baubo’s belly in the ancient Greek sculpture. It is the most tender manifestation of motherhood expressed by a wild animal whose sad look wins the viewer’s sympathy. Respectively, Baubo, according to the legend, is an ugly old woman, coming in contrast with the smiling baby face depicted in her abdomen. In both cases, the familiar is in dialogue with the uncanny, the unfamiliar, in order to form an image that, in addition to its visual narrative, also conveys a message to us.

This message, conveyed by the myths related to the two artworks, enables us to look for the second common feature between them. Let us observe, then, that the “*Big Mother*” becomes a foster mother, who has experienced the loss of

her own child. She holds another mother's child on her chest and breastfeeds it. She relieves her pain caused by her child's death, by prioritizing another child's life. Respectively, Baubo also becomes a "surrogate" mother, according to a more contemporary definition, by giving birth to Iacchus, Persephone's son. This, in turn, eases Demeter's pain. Examining the four Images and the relationships among them with social criteria, we discover that they are unequal: Demeter is a goddess and Baubo is a servant, while the baby is a human being nurtured by a baboon. This inequality, however, does not prevent their interaction.

Baubo is an imaginary creature, a mythological invention in answer to existential questions. Her sculptural representations, however, reinforce the optimistic message of the circle of life. Patricia Piccinini points out that the "Big Mother" is one of the mythical beings she created, as it mirrors a fantasy world, reflecting aspects of reality and answering ethical questions (Antonsen, 2018: 9-34 and Milsom, 2014).

"BULLETPROOF SKIN"

Jalila Essaïdi explores the issue of survival, in the sense of the safe living of man, as well as the political, social, moral and cultural issues associated with it, in the context of bioart. Specifically, the artist deals with the genetic modification of living organisms, in the context of the beneficial intervention of biotechnology in the natural world, in order to shield the latter and deal with the constant changes of the natural environment. For her, it is very important for a person to be able to overcome their insecurities about the dangers of life, as well as to create the conditions to become resistant to factors that threaten their survival. In this direction, she proposes the utilization of the possibilities offered by biotechnology and creates projects that can be used as examples of a constructive dialogue of nature with technology to achieve the supernatural and the superhuman (Iara Mikocki I designboom, 2013). In fact, it refers to the ancient Greek myth about the Homeric hero Achilles, whom Thetis's mother, goddess herself, took care to make invulnerable by dipping him in the sacred river Styx. In other words, a goddess' intervention was needed to make someone invulnerable and, consequently, immortal (Finn, 2013). However, according to another ancient Greek myth, Prometheus, a man, stole fire from the gods to give people spiritual insight. In both cases, the primary purpose is to exceed the limits of human potential (Kerényi, 1998: 198-211).

The issue can also be examined through a dialogue with Essaïdi's work of art. I chose the project "2.6g 329 m / s", or "Bulletproof Skin", which he created in 2011, in collaboration with the Forensic Genomics Consortium Netherlands (FGCN). Specifically, it is a skin tissue, which emerged from the laboratory compound of spider silk and human skin cells. The spider silk was made by geneticists at Utah University, from transgenic goats and worms, while the skin in vitro was made at Leyden University Medical Center. Essaïdi's goal was to create a skin so durable that it could not be penetrated by a bullet weighing a

maximum of 2.6g and a speed of 329m / s of a 0.22 diameter rifle. Although spider silk was considered much more durable than steel, the experiment ultimately failed as the ball penetrated the skin. For the artist herself, the entire attempt was successful in forming a dialogue regarding the ways in which technology can shield humans without marginalizing them, as well as the forms of safety accepted or rejected by society. In fact, the artist considers the aesthetics of indestructible skin as what makes it a work of art (lara mikocki | designboom, 2013 [Images 6 and 7]).



Image 6. Jalila Essaïdi «Bulletproof Skin» (<https://jalilaessaidi.com/2-6g-329ms/>)
© Jalila Essaïdi, Image source (lara mikocki | designboom, 2013).

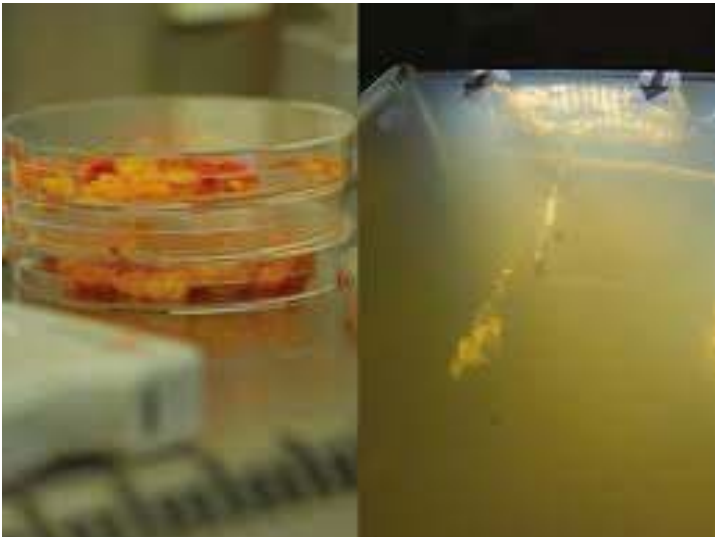


Image 7. Jalila Essaïdi «Bulletproof Skin» (<https://jalilaessaidi.com/2-6g-329ms/>)
© Jalila Essaïdi, Image source (lara mikocki | designboom, 2013)

As bold as it may seem to compare the myth of Baubo's with the hybrid bulletproof skin of Jalila Essaïdi, it is interesting that in both cases the purpose is the same: resistance to decay and death. Let us not forget that many myths refer to creatures with a dual nature, such as centaurs, the Sphinx and sea monsters. According to evolutionary theory, they were based, to some extent, on mythological narratives about supernatural beings and the possibility that they existed as species, which then evolved (L'histoire Des Espèces Envisagée Un Siècle Avant Darwin, 2020). One also needs bear in mind that the myths themselves often refer to the transformation through which the prolongation of life is sought. I chose to analyze one of Ovide's *Les Métamorphoses*, that refers to the Arachné (this name means spider in Greek language), because it is related, in a way, to the work of Jalila Essaïdi. Arachné was a weaver who boasted that her weavers were better than the weavers of the goddess Athena. Then the goddess punished Arachné by transforming her into the arthropod spider that spends its time weaving its web. Therefore, the goddess did not kill Arachné but, by transforming her, she turned her into a humans' servant, as it could now trap annoying insects, such as mosquitoes, in its web. Just as old Baubo transforms into a pregnant woman in order to fight death with life, s equally, the ability to weave is transferred from Arachné weaver to the arthropod spider (Ovide, 1966: 155-159).

BAUBO AND “BULLETPROOF SKIN”

On the other hand, the hybrid clay body of the figurine of Baubo's, as well as the “Bulletproof Skin” of Essaïdi, participate in this creation of the superhuman being. There is, of course, an essential difference among many others: In the first case, Baubo's figurine, the artist uses clay, a material of sculptural art, and does not refer to genetics. In the case of “Bulletproof Skin”, Essaïdi uses natural products which are processed by biotechnological processes, to create a new myth that seeks verification by overturning the theory of the natural evolution of species.

In summary, let us remember that both artists refer to the dipole of life and death, looking for the superhuman, each in her own way. Patricia Piccinini, through her strange complexes, seeks to reconsider the boundaries between the moral and the unfamiliar, with the ultimate goal of promoting humanitarian values. On the other hand, Jalila Essaïdi revises the view that nature is the only source of energy and, through biotechnology, experiments to create a invulnerable human being of dual nature, a posthuman. Is there a difference between the terms superhuman and posthuman and, if so, how is it defined? If the myths and artworks of antiquity are verified by biogenetics and bioart, will the myth of the posthuman be justified as a reality that will lead to the superhuman or will the human fade one day, *like a face with sand on the seashore*, as described by Michel Foucault? (Foucault, 1969: 398) Finally, we can say that

through the dialectic of art, the mythical superman can meet the posthuman of the real world in a context that is both aesthetic and emotional.

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Mpasturavacche: the Taboo of Meeting the Chimera of Oneself

ABSTRACT

This article focuses on Risba's performance 'Mpasturavacche. The milk suckling snake' which was presented on three occasions in 2019: in Galatina, Italy, at Pixxelpoint festival, in Nova Gorica, Slovenia and at The Room in London, UK. The wearable system employed in the performance was inspired by the perceptive capabilities of snakes. The headset used by the participant/co-performer reproduces its heat-sensing vision, while a wearable interface translates the breathing sound of the visitor into a vibration that is felt on the bare skin of the artist. The nudity of the artist reflects the natural state of nakedness in animals. The flicking tongue of the serpent functions as a smelling device, which for its survival must be constant. Therefore, the artist/performer, embodying snake-ness, engages in a "tongue dance" for the entire duration of the performance. The work has been considered both controversial and transformative for many, as it touches upon, reveals and contextualises traditional cultural taboos. Through a focused examination of the multiple important themes underpinning this seldom-seen artwork, this paper aims to trace its life-story in order to augment, elucidate or even complicate the chronicle of contemporary Art and Science collaborations. 'Mpasturavacche' investigates and challenges the supposed supremacy of human-centric perspectives and the potentially mind-baffling consequences of technological fetishism.

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KEYWORDS Animality, power relations, feedback loop, wearable technologies, transformative art.

INTRODUCTION

This section provides the context and background of the paper. During an art residency at STEAM Atelier in Lecce, Italy in summer 2019, Jatun Risba devised and presented the one-to-one performance ‘Mpasturavacche. The milk suckling snake’. This Art and Science performance lets participants explore the perceptive abilities of snakes through wearable technologies. By disclosing the instincts and impulses of the lizard brain in the human animal, the artwork makes sense of and alleviates humans’ estrangement from nature. During the performance, the artist/performer and the participant/co-performer are linked by an “umbilical cord” that acts as a communication channel between the two. The participant receives a VR headset with thermal vision, an Arduino board and a highly sensitive voice sensor mounted close to the mouth. The device is connected to the artist, where a wearable technology system – made of micro motors mounted on a piece of isothermal textile – pulses in time with the visitor’s breath. These interfaces mimic the sensory properties of snakes, such as thermal vision and the responsiveness of the snake’s skin to vibrations.

The text draws on Risba’s lived experience of radical self-healing from Multiple Sclerosis which began with an extended practice of authentic movement in a state of trance performed both at home and in public places. The artist identifies that the encounter, gradual befriending and out-growing of Multiple Sclerosis at a young age, as much as anything else, paved the way to developing a context-specific art practice – the arts of self – where art is used as a tool for self-healing, self-empowerment and community-building.



Image 1. Jatun Risba: Mpasturavacche at The Room, 2019, London,
Photo by John Antony Thadicaran, ©Jatun Risba

The paper was written using the Five Ws (Who, What, When, Where, Why) and How technique of information-gathering or problem solving. This simple method helped the writer follow the thread of inquiry with patience and diligence; a demanding task due to the author's visceral involvement and vulnerable position in relation to the subject matter. The technique proved to be effective.

WHO IS 'MPASTURAVACCHE. THE MILK-SUCKLING SNAKE'?

*"For I am the snake that is the beginning and the end of the human.
 I am the most venerated and most despised cow,
 I am the ethical slut, the non-aligned Other and the Madonna,
 I am the virgin and the widow,
 I am the mother, the father and the rejected daughter.
 I am my grandmother's bare arms, the meaning out of my grandfather's breasts.
 I am sterile and bloodless, yet fertile,
 I am an unnameable creature, married and single,
 I am the one who gives birth and the one who never procreated,
 I am the one who consoles from the pains of delivery and dying.
 I am a bride and a groom who have no possessions.
 And my sex nourishes my augmented sense, my dilated sensations,
 I am the Cow of God,
 I am the foot of my husband's plant,
 And he is the son who I've rejected.
 Always respect me,
 For I am the shameful and the magnificent one."*

(Jatun Risba: Mpasturavacche. The milk-suckling snake, 2019)

Mpasturavacche is the dialectal name in Apuglia, Italy, of the common four-lined snake, which was believed to suckle a cow's milk while entwined around its legs. This folkloristic imaginary inspired the creation of a transmedia artwork with the same name. Mpasturavacche, the protagonist in the one-to-one Art and Science performance by and with Jatun Risba, is a human–animal hybrid who manifests some of the sensory abilities of snakes and who greets visitors/co-performers without clothes on. Mpasturavacche is a cyborg creature who, like animals, is naked without feeling shame, and whose undressed female thinking-body does not aim to be sexual or sexualized. Instead of wearing clothes, Mpasturavacche's figure is adorned with low budget, open-source technology. The wearable technology on the artist/performer is composed of a stepper motor and a few micromotors which are attached to an ornamental and therefore "criminal" (Loos, 1908) piece of isothermal fabric which has an aesthetic value only. The wearable is neither covering intimate body parts nor serving any other logical purpose. The fact it is made from a space blanket, as used by travelling refugees, makes it doubly 'criminal' in its status as a utility object which is nevertheless decorative and ornamental. It can even become, as in the case of Mpasturavacche, a ceremonial magic object. The wire that charges the micromotors is connected to a headset with thermal vision for the participant's use, a power bank, an Arduino Nano board and a highly sensitive

sound sensor mounted in the proximity of the visitor's mouth. The micromotors on the wearable translate the participant's breath into vibration and sound that can be heard and felt by the artist. This low-tech wearable system creates a visceral bond between the participant and Mpasturavacche in the role of host.

Mpasturavacche is a creature of banal gestures. The sinuous movements of the spine, the rising up of the arms at slow pace that reveal underarm hair and end with the hands around the horns, the flicking tongue... repeat over and over again. And yet, however banal they may seem, these repetitive movements cause a narrowing of the artist's attention that may lead to trance or in other words, to an exploded state of consciousness; a meditative condition augmented by the single-pointed attention of focused gazing. This brings the artist into a state of loving awareness, in which Mpasturavacche looks straight into the visitor's eyes for the whole duration of the encounter, which lasts approximately 15 minutes.

What dynamics are at play? By presenting an unrobed cyborg who is at home and at peace with being a body, rather than having a body; who is not interested in engaging in predatory games of seduction or sexual domination, the artwork challenges the apparatus of the gaze: its his-torical dynamics of socio-political power relations and its technocratic mechanisms of discipline. By being a shameless female body, the mythical creature of Mpasturavacche causes the participant to confront its own learned impulse of denial and fear of its own animality. The performance opens up an intimate setting in which visitors can meet, and peep into their forbidden self; the undomesticated body with its impulses, desires, needs, and limitations.



Image 2. Mpasturavacche at Pixxelpoint festival 2019, photo by Franco G. Livera. ©Jatun Risba



Image 3. Mpasturavacche at Pixxelpoint festival 2019, photo by Franco G. Livera. ©Jatun Risba

Who is afraid of facing an undressed technomutant who is gazing directly into their eyes and says, intends or wants nothing? Who is afraid of being a body without the superstructures of the human mind? A cyborg body only, without desires, purpose or aims, just standing there as technologically enhanced flesh in a state of nonconceptual awareness. The relaxed bodymind of the artist expresses a sense of all-rightness and peace. Following Derrida's thoughts, "it is not just a matter of giving back to the animal whatever it has been refused... It is also a matter of questioning oneself concerning the axiom that permits one to accord purely and simply to the human or to the rational animal that which one holds the just plain animal to be deprived of (Derrida, 2008: 95).

WHAT DOES MPASTURAVACCHE PUT INTO ACTION?

Mpasturavacche refers to the Temptation and Fall of Man from The Book of Genesis with the employment of rudimentary Open-Source wearable technologies. The artist-performer embodies the serpent who sinuously flexes its spine while looking fixedly into the visitor's eyes. After passing through the waiting room and having read the projected poem that initiates the visitor to the experience to follow, the participant/co-performer receives simple instructions. They may move freely in the space and interact with Mpasturavacche however they want, with and without the use of the provided headset with infrared vision. They are absolutely free to do and behave however they want. But are they really?

WHEN DOES MPASTURAVACCHE BECOME UNCOMFORTABLE?

The steady look in the eyes of Mpasturavacche questions what has been called a female gaze wherein bodies and emotions are prioritized over technical equipment and action. The naked artist-performer may be considered indecent due to being caught in the act of "returning the gaze". A fixed gaze is a dominant gesture and therefore unsettling. The insistent gaze of Mpasturavacche is, like an animal's, active and bottomless. It transforms Mpasturavacche into the protagonist of the situation and the participant into an object of attention. This reverses the usual power relationship between a human or animal "nobody" represented in this case by an intersectional artist in a state of self-transcendence, who is standing naked in front of the spectator/consumer/agent of contemporary Art. In this way Mpasturavacche reclaims the physical presence of marginal "others", human and nonhuman, and kin right for cultural, political and economic participation in decision-making processes.

Returning to Jacques Derrida's ideas about the animal, such a bottomless gaze allows the human to see and be seen, through the eyes of the other, in the seeing. Embarrassment in front of the insistent gaze of an animal – the so-called "animalséance" (Derrida, 2008: 4), has the power to arouse insights and deep transformational processes.



Image 4. Mpasturavacche at Pixxelpoint festival 2019, photo Franco G. Livera. ©Jatun Risba

WHERE HAS MPASTURAVACCHE BEEN REJECTED, CANCELLED WITHOUT PRIOR NOTICE OR ILLEGALLY APPROPRIATED?

In September 2019 the artist was invited to perform Mpasturavacche at the Irregolare Festival: an event occurring on the southeast coast of Italy known as Apuglia dedicated to trance, rituals and altered states of consciousness. Apuglia is famous for the phenomenon of “tarantismo”, a therapeutic dancing ritual of pagan origin. The manic dance of the “tarantati” was popularly believed to result from the bite of the tarantula wolf-spider. Those afflicted were mainly women on the social margins suffering from gender and social discrimination in a region historically affected by mafia activity and patriarchy. In the words of a performance scholar from Apuglia, “there was a sense of shame associated with tarantism, and still, for my parents, there is a sense of bewilderment as to why I would be interested in such a phenomenon of madness, which for them – whatever its folkloric valorization – had mostly negative connotations” (Manco, 2011).

In relation to the traditions and material culture of the Apuglia region, Mpasturavacche embodies a spooky cyborg return of the silenced and neglected bodies of the “tarantate”. Unlike the ancient possession ritual, the performance of Mpasturavacche is pre-meditated and self-determined. Admittedly, the spinal and tongue “snake dance” of the disrobed artist might be scary and

disarming as it confronts people with the primary inner sources of delusion and social inequality: ignorance, desire and hatred. And yet by fiercely embodying kin own natural perfection (which has nothing to do with outer appearance) and not succumbing to the pressures of social acceptance, desire and lust, Mpasturavacche provides an opportunity for transpersonal transformation.

According to the program of Irregolare Festival, the performance was to be presented in the Marquis Palace of Arnesano, and yet was abruptly cancelled by the mayor two hours before the official start of the event. This critical incident was described by Risba in a collective reflection and statement published in Italian in the online journal *Segno Particolare* (Risba et al., 2019). The writing of the article was an exercise in sensemaking aiming to elucidate the incident. What were the driving forces behind this harsh intervention from the mayor's office?

Without doubt the influence of the Catholic tradition in southern Italy, especially in rural areas, continues to be strong. As a result, the perception of female nakedness as sinful, tempting and dangerous persists for many. The act of municipal erasure and a-void-dance (Barad, 2019) of Mpasturavacche quieted its eloquent commentary on gender inequality and sexism. It was a risky and problematic artwork for moralistic politics as well.

WHY IS MPASTURAVACCHE SO DISTURBING AND SO THOUGHT OR LUST-PROVOKING?

For the artist, Mpasturavacche embodies and enacts a world without gender, sexual or species discrimination. A world where a female, non-binary, hybrid body feels safe-enough to be able to share itself in a state of vulnerability without fear of being physically or verbally harassed, abused or murdered. The artwork articulates and reclaims the possibility of a nonviolent world where everyone is accepted, respected and loved without exception. In other words, the performance bears testimony to the ubiquitous reification of women's bodies that mirrors a long history of gender bias and exclusion. Instead of perpetuating the toxicity, misconduct and violence of these phenomena, Mpasturavacche presents a fierce bodymind who is an ultimate repository of and witness to love. A naked awareness which continues to remember and hold on to the dream of a free world with a loving interspecies community.

A homo sacer (Agamben 1998) who stands tall while incarnating the quality of all-pervading peace and bliss in front of you and for your eyes only. Such a countercultural standpoint shakes the foundations on which consumerist extractive societies exist. This reveals an opportunity to radically rethink and reshape our relations with human and nonhuman kin, and therefore a move away from the historical mould of exploitation, extraction and exclusion.

In the practice of 'artist of self' Jatun Risba, art occurs as a regurgitation of lived experiences and embodied knowledge. The creation of Mpasturavacche was undoubtedly inspired by Risba's hometown: Nova Gorica, which lies in Western Slovenia, on the border with Italy. Nova Gorica is a planned town, built

after 1947, when the Paris Peace Treaty established a new border between Yugoslavia and Italy. The town has long been renowned for its several casinos and its 'girlie club', both of which have a considerable clientele of Italians.

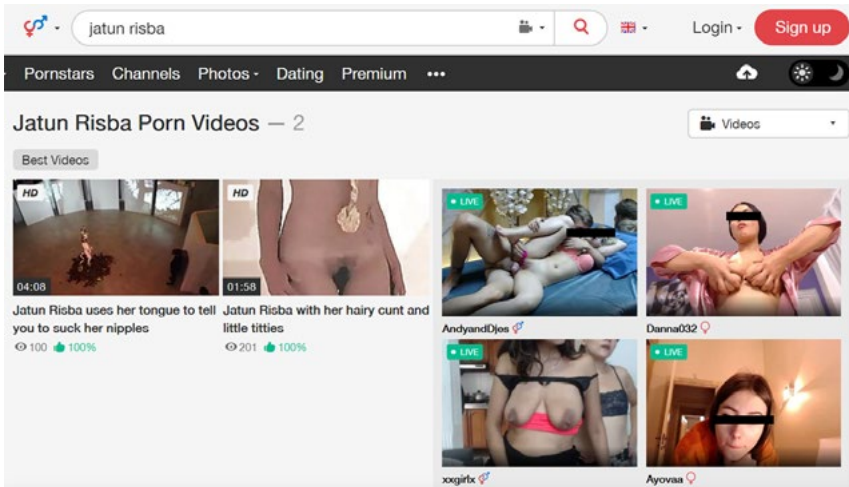


Image 5. This is an example of Mpasturavacche's Copyright Infringement and fake porn defamation. © Courtesy of the author.

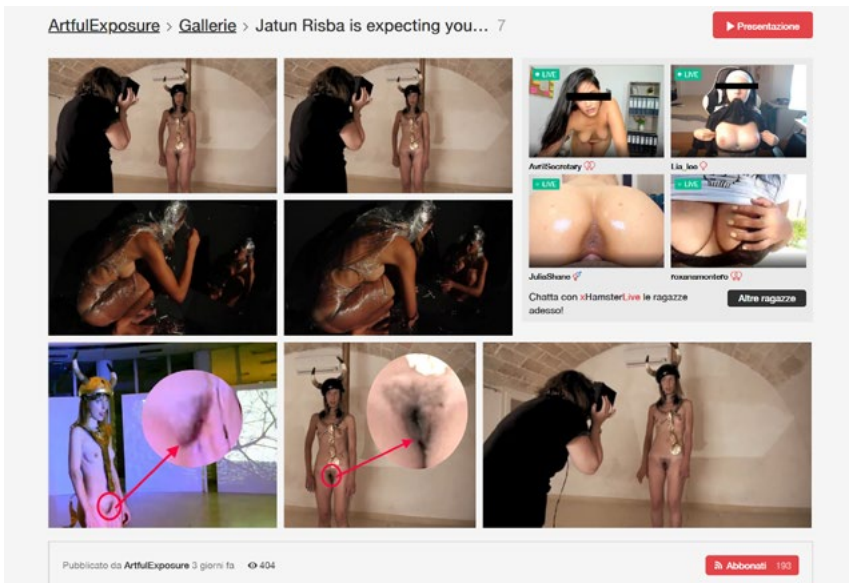


Image 6. Another example of Mpasturavacche's Intellectual Property violation and fake porn abuse. © Courtesy of the author.

When the work was invited to the local art festival at New Media Arts Pixxelpoint in November 2019, the artist wanted to present the work in a local sex club situated two minutes' walk from the border. When the artist approached its manager to discuss the possibility of hosting the event, the proposal was rejected on the grounds of not being profitable.

A few months later the artist received an email in good english from an unknown stalker who had hacked the two online videos of the Mpasturavacche performance and published them alongside some screenshots on innumerable porn websites and platforms. After sending dozens of DMCA takedown request forms, the artist reported the crime to the police as an instance of Intellectual Property Theft. To date, Risba has not received any further notice about the case. A few months after the criminal complaint, the artist was contacted via Instagram by an American female designer and artist who was a victim of the same cyberporn criminal. Lastly, and yet not the least important in terms of the overall seriousness and ubiquity of 'wrongful appropriation, abuse of power and sexual harassment in contemporary European societies, two important Slovene newspapers - the regional paper Primorske Novice and the national daily newspaper Delo – published and printed, without authorisation, articles including a full frontal nude photo of the artist performing Mpasturavacche.

The copyrighted photograph had been downloaded from the artist's personal website without notice, consent or compensation. The author of the article was in both cases male. The selected photo had not been shared with the curator of the festival, or included in the festival's Media Kit. In addition, the image of Mpasturavacche accompanied a half-page announcement about the upcoming Pixxelpoint festival without providing critical information about the artwork's context, leading to its potential interpretation as a "hysteric" act of female exhibitionism. The attack on the artist could be seen as a modern mediatic twist on the public shaming the "tarantate" used to suffer in traditional patriarchal societies. Extrapolating sensitive content without asking for approval and without a proper contextualization of the artwork, was an act of violence and intimidation against the author.

This misappropriation of intellectual property rights accompanied by online sexual harassment can be taken as a case study exemplifying the violence inscribed in acts of seeing and consuming images of an-other un-familiar commodified being. It also elucidates the apathy of the criminal justice system in relation to dealing with and preventing current forms of cybercrime. With the increased digitalization of our lives due to COVID-19 and lockdown measures, online delinquency has been growing at an unprecedented rate (INTERPOL, 2020). As a site of social interactions, cyberspace is a reflexive phenomenon. While admittedly it can be a social equalizer, it can also perpetuate social inequalities and power differentials in society. Internet pornography both replicates existing power relations and further extends the reach of exploitation (MacKinnon, 1995).

and narrate what, to whom, and on behalf of whom? Who names and who gets named? By disengaging from the conventional mental elaborations/structures and prejudices of a commodified patriarchal heteronormative racist Anthropocene society, which expresses its values predominately through the medium of vision, the work provides a ground-breaking embodied experience of reciprocity. In the end, with or without technology, beauty, meaning and agency remain in the eyes, heart and mind of the beholder.

CONCLUSION

To sum up, *Mpasturavacche* is a work about the ubiquity of power relations in contemporary societies in general and in the Art and Science field in particular. The artwork conveys a bold commentary on the toxic, extractive and systemically subduing ‘dispositif’ (Foucault, 1980) of Contemporary Art, where artists are pushed to sell their values, legacies, minds and bodies to art pimps, usually white and male, in order to receive visibility, commissions and professional acknowledgement. On a metalevel, *Mpasturavacche* offers insight into the historical roots of violence against animals, women, indigenous, queer, Black and intersectional people. By reclaiming the right to be a body that deserves to be seen, acknowledged and respected, *Mpasturavacche* breaks the taboo of compliance with gender, sexual, racial, disability, species, etc. discrimination that is so engrained in contemporary culture, institutions, and politics.

By producing an intimate feedback loop, *Mpasturavacche* points at the apparatus of systemic suppression, domination and fetishized objectification of “disposable” living beings that has been in service since the beginning of recorded history. The experience of the artwork generates antibodies for natural immune responses to the ultimate malady: the pervasive perpetuation of violence towards human, nonhuman and more-than human “no-bodies”. From another perspective, *Mpasturavacche* reclaims the right of every sentient being to a life of dignity, unconditional love and security, for the benefit of all. For the benefit of all...

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Gunther von Hagens and the Seductive Flesh of Cadavers

ABSTRACT

The full-body plastinated cadavers made famous in Gunther von Hagens' internationally touring Body Worlds exhibits are often described as 'controversial'. However typically lost in these discussions are the visual analyses of the art historical modalities referenced in the corporeal displays of Body Worlds. Historically, portraits frame individual sitters through pose and attribute, anchoring them to particular places and times. Similarly, von Hagens' plastinates present the polymer-infused corpse body as individuals defined by gesture, pose and activity. The visual rhetoric of these figures parallel the conventions observed in early modern portraits. In this article, it is thus argued that von Hagens' full-length plastinates occupy a new space, constitute a new genre, a new visuality called anatomical portraiture. This new genre fuses the conventions of early modern portraits and traditional anatomical display, creating portraiture defined by gestures and attributes that signify and construct gender. Additionally, the materiality of plastination technology necessitates an interrogation of the boundaries separating figure from pigment and attribute. The female plastinates of Body Worlds vividly highlight the tension between subject and object, horror and pleasure, desire and anxiety.

KEYWORDS Body Worlds, portraiture, portrait, anatomical, gender, plastination, pose, attribute, early modern, fetus, humours, blood.

Suspended from wires, she hangs from the ceiling. Spotlight from above, her rosy flesh appears incandescent against the black walls. Tauntingly, her head hangs beneath her. The backbending arch of her pose presents her perky white breasts at the eye level of viewers. Her body is flayed, skinned head to toe with her nipples atop her skinless breasts like firm, rosy cherries on an anatomical sundae. The bright white band of her fasciae latae emphasizes the tantalizing s-curve of her body. She is *Yoga Lady* (2002), created by Gunther von Hagens, using his patented plastination process and on display in his internationally-touring Body Worlds exhibitions.

In 1977, inspired by meat slicing machines at the local butcher's shop, German physician-scientist-inventor Gunther von Hagens created the cadaver plastination technique. The plastination process involves the removal of all fats and fluids from the cadaver body followed by the forced impregnation of plastic polymers in their place. The result is a preserved corpse body that is durable enough for prolonged, posed display and tactile interaction (Johnson, 2011: 19-20). In 1992, von Hagens first incorporates aesthetic considerations to the plastination process when he completes the first full-body plastinate. By 1995, von Hagens displays a collection of plastinated bodies to form the first Body Worlds exhibition. As medical historian J.H.T. Connors notes, due to the material composition of the plastinate bodies of Body Worlds, these cadavers closer resemble posed "action" figures than they do dead bodies (Connor, 2007: 258). Scholar of new media, Jose van Dijck refers to the Body Worlds plastinates as a type of hybrid body, existing somewhere between cadaver and model. Art and science (van Dijck, 2001: 119). Today, there are multiple, internationally-touring Body Worlds exhibitions and four permanent installations in Berlin, Amsterdam, Guben and Heidelberg. Body Worlds exhibition displays construct, to borrow from Tony Bennett, an exhibitionary complex, where viewers are guided from one full-body anatomical spectacle to the next by neat rows of glass vitrines that display individual organs, structures and systems (Bennett, 1995, p. 65). Von Hagens has become well known for being an eccentric pop culture figure, the tv anatomist in a Joseph Beuys style hat, the creator of the spectacle of sensationally posed cadaver bodies—and he is considered quite successful when you remember that Andreas Vesalius wasn't featured in a James Bond movie cameo.

Von Hagens asserts that the cadaver poses of Body Worlds are intended to be simultaneously pleasing to behold and while also useful for research and educational purposes. I insist that Body Worlds' full-length plastinates are communicating as what I have named "anatomical portraits" of gender types, where gender is constructed in a Butlerian sense and the cadavers embody the framing techniques of early modern portraiture. Anatomical portraiture is at once a new genre and yet one that draws on the rich historical traditions of both anatomical display and traditional portraiture. Von Hagens certainly isn't the first to pose his anatomical specimen; he follows in the footsteps of Fragonard, Albinus and Susini among others. Early modern portraits frame sitters according to gender types, figural pose and material attributes. Specific gestures and attributes are linked to the body itself, as worn or touched by

the sitter, to visually construct gender, and implicate the flesh of the body. Historians Caroline Castiglione and Suzanne Scanlan (2017) assert that the bodies of early modern female portrait sitters are understood as sites on which to “display dynastic identity and chart the boundaries between the sacred and the diabolical, or embody class anxieties” (Castiglione & Scanlan 2017: 59). Art historian Paola Tinagli argues that 16th century Venetian female portraits represent types rather than individuals, defined by clothes, jewels and the direction of the gaze (Tinagli, 1997: 103). Where male portrait sitters were depicted as autonomous, active members of society, female subjects are more prominently emblazoned by signifiers of their husband or family in clothing and attributes—simultaneously defining their bodies and signalling their place within the gendered social hierarchy. The anatomical portraits of Body Worlds are each deeply rooted in early modern gender stereotypes. The depiction of active and passive movement; submissive or assertive gesture—the plastinate body instantly appears inscribed with gender.

Female Body Worlds plastinates are presented as objects to be looked upon. Traditionally, the female bodies of portraits are fashioned as primarily beautiful, objects crafted for the male gaze and framed in a way to communicate either proper submissive behaviour, maternal virtue or sensual flirtation. The visual materiality of femininity is grounded in the incorporation of clothing and jewelry that signals the identity and alliances of the sitter and her family. In Bronzino’s 1545 iconic dynastic portrait of *Eleonora di Toledo & her son Giovanni*, the sumptuous textiles signify not only the wealth of her Spanish aristocratic birth but the wealth of rich textiles that her adopted Florence had become famous for. In highlighting her sense of style and knowledge of courtly manners instilled in her upbringing in the Neapolitan court, Eleonora signifies not only her husband’s rightful territorial claims but also the legitimacy of the the Medici dynasty to come in the form of her son beside her (Tinagli, 1997: 111-112). As historian E. Natalie Rothman demonstrates, Mediterranean female costume locates portrait sitters in a network of dynastic origin, genealogical network, diplomatic service and sartorial style popular in their place of birth (Rothman, 2021: 19-21).

Early modern portraits are often approached as depicting the real, visual resemblance or likeness of an individual person. Art historians Patricia Simons, Marcia Pointon and Joanna Woods-Marsen demonstrate that instead, early modern portraits depict gendered, idealized types that serve the status and social identity of the sitter (Simons, 1998: 5; Pointon, 1993: 18; Pointon, 1993: 175-198; Woods-Marsen, 1987: 209-216). Even after death, the female portrait persists as a site of idealized feminine beauty and virtue. The funeral monuments of early modern aristocratic Roman women exists on a continuum: from likenesses in their most attractive bloom of youth to depictions of the deceased as classical eternal goddesses as in the cases of Venus, Aphrodite or Flora figures (Castiglione & Scanlan, 2017: 84-93). Unlike the nude female figures seductively posed and decorously titled as Venus figures, in funeral portraits, the Venus type connotes youthful beauty & vigour, the female virtues appropriate in marriage and motherhood while also referring to one of the most treasured artistic possessions of the early modern period (Castiglione &

Scanlan, 2017: 84-95). The funeral female goddess type assumes virtues and beauty dictated by bygone civilizations while simultaneously gesturing towards artifacts to be collected and possessed. Even in death, the female portrait observed their construction of costume, attribute and sartorial style to define their legacy—not independent assertions of individuality or personhood.

Raphael's 1505-07 portrait of *Maddalena Doni* not only emphasizes the role of textiles in presenting social rank but also the vital role that jewelry gifted to brides plays in the construction of social rank and identity. The pendant around Maddalena Doni's neck not only signifies wealth but the deeper meaning of the large emerald (chastity), sapphire (purity), ruby (prosperity and strength) and pearl (virginity). The symbolism of the jewels is underscored by the unicorn setting which also gestures towards the proper chastity of a woman of upper social rank (Tinagli, 1997: 95-99 & 111-112). The visual rhetoric of jewels in early modern portraiture extends into the anatomical display of female figures. Early modern wax anatomical models like the famous Venus de Medici of Museo della Specola in Florence, are adorned with pearl jewelry that underscores sensual symbolism, feminine beauty and the implied reproductive purpose of the female body. The display of female Body Worlds plastinates are not accompanied by luxurious textiles or fine jewels. Unlike the wide variety of attributes displayed with the male cadavers of Body Worlds, the visual engagement of female plastinates with worldly materialities is very limited. Instead the skinless women of Body Worlds are posed with dance shoes, ice skates, bow and arrow or swing. Femininity is punctuated by the fetishized flesh of the body, sensual poses and the gestures of passive actions. Whereas male plastinates are displayed in active roles, visually engaged with a variety of material objects from popular culture, sports, and history, the female bodies most often act as beautiful but passive objects on display.

While material objects have gone unrepeated in the display of plastinated male bodies, an object is repeated in the display of female Body Worlds plastinates: the swing—in both *Woman on a Swing* (2009) and *Yoga Lady* (2002). The swing is an object suggestive of childhood youth that further exposes and infantilizes the anatomized, adult gendered body. In the presence of von Hagens' *Woman on a Swing*, the sensuality of Jean-Honoré Fragonard's *The Swing* (1767) immediately comes to mind. The composition positions the older husband of the young woman behind her, as he pushes her on the swing, she kicks her legs high in the air—revealing all to her lover concealed within the thorny rosebushes below her. The left hand of von Hagens' *Woman on a Swing* appears to suggestively tease her hand along the rope above her head, her neck bending as she seems to coquettishly gaze upward at the viewer. The contrasting pigmentation of her musculature, bones and tendons guide the viewer gaze up from her feet to the point of intersection between her thighs. Her left foot rests on the rock beside her, her right leg widely spread in parallel—revealing her labia majora that comes away from the plank of the swing seat. Historically found in venues such as nineteenth century cabaret Moulin Rouge and commonly found today in gentlemen's clubs and erotic Las Vegas showcases, swings have been appropriated as tools to elicit male arousal. The

cadence of the swinging action conveys a teasing, flirtatious eroticism. The pace can be altered from a seductively slow rhythm to a fast frenetic beat, picking up speed by periodically raising one's legs to "kick". With one movement, the most intimate spaces of the female body are revealed, and with another they are concealed by the plank of the swing in motion. As such, when operated by adults, swings visually signal foreplay, flirtatiousness and lasciviousness.

While resting on multiple swings, von Hagens' *Yoga Lady* further recalls the narrative of corporeal legibility surrounding the Charcotian female hysteric. Her body is contorted yet sensually presented. This female cadaver is scientifically frozen in a back-bending position. The head of the female plastinate dips below her back, positioned between her two elbows, thus preventing the easy return of the viewer gaze. Rather her eyes instead meet the viewer at their lower torso. Her rigid, rosy nipples are erotically suggestive atop her firm breasts, meeting the viewer's eye level. Art historian Didi-Huberman demonstrates that the photographs of female hysterics are often voyeuristic and eroticized, with female patients appearing scantily clad or only partially clothed (Didi-Huberman, 1982: 49). While hysteria was believed to be a largely invisible disease of the nervous system, it was discussed as demonstrable, observable through the aesthetics of clinical presentation in the form of fits and seizures. As cultural historian Sander Gilman insists, the symptoms and signs of the hysteric body were legible and written on the body—presenting in bodily contortions and full-body seizures (Gilman, 1993: 388). The visual rhetoric of this plastinated body seems to echo the theatrical demonstrations of Dr. Charcot at La Salpêtrière (Showalter, 1991, 309). Just as Dr. Charcot claimed his status as the ultimate authority of the hysteric female body, having the ability to conjure the physical displays to confirm the inner mysteries within the patient—von Hagens' signature accompanies the full-body plastinates, signed on a metal tag (Brown & Moore, 2008: 13). The male gaze, again, claims the authority to unlock the mysteries of the contorted, sensual, mysterious female body.

The anatomical compositions of Body Worlds plastination is also marked by the penetration of more than simply the male gaze but the presence of an(O) ther—in fetal bodies revealed within their uteruses. In contrast to the iconic figure of the parturient body of Museo della Specola's wax anatomical Venus, where the fetal body is revealed in the successive removal of ceroplastic layers of the torso, the plastinated maternal body has had layers of her lower torso stripped away to reveal the pale white fetus within her. Towards the end of Body Worlds exhibitions, visitors are confronted with rows of embryos and fetuses lined up in front of red velvet curtained walls. The embryos, ranging from two days to eight weeks gestation, are suspended within clear liquid in laboratory-like test tubes. The fetuses, from nine weeks to eight and a half months of gestation, are shown atop pillows of crimson or black velvet within plexiglas cubes. These tubes and cubes visually guide visitors to the centrepiece of the display, a kind of reproductive climax, which von Hagens has entitled *Reclining Pregnant Woman*. She is lying in a sensual, recumbent pose, nude and skinless. Her vividly pink exposed musculature articulates the curves of her body and a lily-white fetus is tucked neatly inside her dissected womb. Von Hagens creates

the illusion that the fetus is actively spinning within the uterus by cutting away the maternal stomach—leaving the posterior of the fetal bodyguards physically assaulted by the harsh exhibition lights above. Curled in the fetal position, the small figure seems to gesture that it needs protection. Installation lighting signals that the fetus is exposed, threatened and vulnerable. This particular plastinate, as noted by Mackenzie and Brown, is one of the most controversial, eliciting the most extreme reactions from visitors (Brown & Moore, 2008: 9-10). Why might these extreme visitor reactions emerge in viewers now, in the context of Body Worlds exhibitions?

Pregnancy, once an intimately embodied experience, is today verified by medical tests, documented by technology, and popularized in the mainstream media, exemplifying what Barbara Duden calls the “public fetus.” Duden’s “public fetus” refers to the proliferation of imaging processes that present the fetus as an autonomous being and allow it to be accessed and controlled by those outside of the maternal body. Regardless of whether expectant parents can see the details of the developing fetus, they feel entitled to own an image documenting the “development” of their baby. However, the display of the pregnant and fetal bodies is certainly not new. For centuries, the anatomized pregnant body has been on display in the anatomical atlases of Vesalius, William Hunter and William Smellie, subject to the study and inquiry of medical students and laypeople alike. The increasing professionalization of anatomical study correlates with the ritual exposure of the female body. As historian Katharine Park argues, this allows for the uncovering of the perceived secrets of women, the most important secret being the generation of new life (Park, 2006, p.33). The dissection of a pregnant woman was a much-coveted event that most anatomists could witness once in a lifetime. In the early modern period, after the popularization of public and academic anatomies, a shortage of bodies arose out of fears surrounding grave robbing, burial rituals and vivisection, this led to experiments conducted on the living. As the numbers of available cadavers and therefore public dissections decreased, anatomical models were increasingly viewed as a viable substitute. Models of wood, wax, clay, cloth and paper could be used to train physicians, surgeons and midwives on important structures and systems (Mazzolini, 2004, p. 56; Maerker, 2011: 55). The female body was actively linked to the expelled products of the uterus, and anatomical models were able to construct both the uterus and illusive foreign bodies that could exist within it. Gunther von Hagens’ plastination technology appears seamlessly incorporated into the skinless corpse body. Injecting polymers means that the cadaver flesh can be stretched, twisted, and hardened around the objects it is displayed with; flesh of the body and object are biochemically joined to become one. The plastinate arguably transforms the cadaver body into a new materiality entirely. Instead of visually penetrating layers of ceroplastic ‘skin’, the skinless Body Worlds corpse seems to be a magical being that manifests before the viewer. This transforms not only the visual display of the body, but blurs the boundaries separating cadaver body, figural pose, and attribute object in a way that neither the anatomical display nor traditional portrait genre had previously.

What separates the pregnancies of the early modern period and ours today is not only the understanding of the status of the fetus, but also the relationship that the culture of each period assigns to the space of the maternal-fetal relationship. Where the fetus exists in contemporary culture in the space-like images of Lennart Nilsson or the black theatrical space of the sonogram, it remains visually alien to the female body. Von Hagens, however, forces the viewer to recognize the relationship of generation and reproduction within the maternal body. The plastination method visually and physically cements the fetal body to that of the parturient. The resulting combination of illustrated lifelikeness, physical maternal connection, and the assertion of deceased materiality, is what drives some Body Worlds visitors to their extreme negative reactions, particularly towards the parturient plastinate figures.

Critical to understanding this visual display of the public fetus within Body Worlds exhibits is the depiction of blood. The implied presence of blood was understood as essential to the rhetoric of lifelikeness beginning in the sixteenth century, whether in art or medicine (Jacobs, 2005: 111 & 29-131; Camporesi, 1995: 14-17). The presence of blood was critical in conveying lifelikeness in early modern art and modes of representation. Through an analysis of Giorgio Vasari's writings on da Vinci's Mona Lisa, Jacobs argues that it is because of the pulse that appears to beat beneath her skin (*battere i polsi*) that rendered Mona Lisa the 'living image' instead of a contrived, static, posed, two-dimensional figure (Jacobs, 2005: 130). In early modern society, blood was not simply a medical commodity as it is often thought of today. Blood was a major early modern societal player on multiple levels of existence and definitions of selfhood. Until the eighteenth century blood was referred to as, "father of all the humors" (Camporesi, 1995: 14). As noted by cultural anthropologist Piero Camporesi, blood, its purity and quality, was associated with life and salvation (Camporesi, 1995: 14). Blood was believed to have healing powers—stemming from the Catholic dogma of the healing powers of Christ's redemptive blood, reinforced with every mass ceremony, to restore life, reunite bodies and heal wounds (Camporesi, 1995: 15). Blood was a key ingredient to the elixirs for long life. Physicians, apothecaries, charlatans and great intellectuals agreed that the blood of a young, fresh, delicate man, well-tempered in humors, soft, blooming with red, "bloody" fat, of a "jovial" temperament and a "cordial" character, preferably having red hair (by association of the colour of the hair with that of blood)—enjoyed the indisputable primacy when it came to the slowing of the aging process" (Camporesi, 1995: 17). In the kitchen, blood became the stock, the finest of human juices, with which food was prepared—the thick, viscose liquid being used to prepare endless amounts of blood sausages, blood puddings, brain puddings, and blood cakes (Camporesi, 1995: 18). Blood could be let or consumed to restore the balance of the body—two treatment methods that were considered as important as today's medications and surgeries (Arika, 2007: 110).

While plastination technology does not necessitate the addition of pigment to the plastination process—as evidenced by the multiplicity of medical schools and institutions that create their own plastinated specimen—the full-body

cadavers of Body Worlds are universally pigmented with deep red and pink hues. The status of the fetus within *Reclining Pregnant Woman* is complicated by the tension established in the essence that life is found in death. The maternal body is bright red, symbolically infused with blood. The fetal body is the palest white. The fetus defines the female body. Instead of the small, inhuman ball of limbs observed inside the Venus de Medici, von Hagens preserves what appears to be a nearly full-term fetus. In a transitional pose of rotation, it shows itself as human but has not quite rotated to reveal itself—it has yet to enact its own individuality, face and identity. This fetus has encroached upon the space of the parturient body, compacting the surrounding organs, altering her physical reality to suit its own needs. This fetus is visually asserting its place in her body, its right to be there. While the body of the fetus still enjoys (symbolic) protection of its original, lily white anatomical skin, it visually lacks the lifelikeness portrayed in the pigmentation of the maternal musculature. When this icon of life is shown as a corpse, signalled by its pale white color and the insinuation that the life has left its body, the visitor experiences the death of an icon. The image of the fetus, the modern cultural icon of life here becomes the body denied life, therefore not only confronting the visitor but also shaking the very foundations of their belief structure.

Unlike the glass jars of embryo collections or the embryological photography of Lennart Nilsson, the plastinate parturient as “container” serves as a source of both safety and danger. Alive, the female body symbolizes a source of fetal nourishment; deceased it is a fetal cause of death. The plastinate parturient corpse is displayed as highly reactive, catastrophically threatening. The visuality of the connected fetal-parturient body endangers all certainties that the medical sciences have fought to create in tests, procedures and imaging. But in the maternal-fetal connection, the parturient body also symbolizes that which loses, the body that is defined by the organs exposed in its display-incisions. In its loss of the ‘child,’ it has ceased to function. It has ceased to deliver new life into the world. It is this simultaneous visible connection, three dimensional and in vibrant lifelike colours, that unsettles the contemporary viewer today—having become so accustomed to encountering the fetal body outside of the embodied connection to its maternal environment. *Reclining Pregnant Woman*, polarizes Body Worlds visitors by engaging with early modern definitions of lifelikeness—making the maternal figure seem alive enough to represent her own agency yet visually acting as a vessel of death.

The traditional male gaze is courted by the female anatomical portraits of von Hagens. Simultaneously evoked is the tension between desire and anxiety—woman as seductress, woman as annihilator.

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PLAY ME – Sonification of Sexual Arousal in Live Performances

ABSTRACT

PLAY ME is a unique and innovative system for the musical expression of erotic emotions and sexual arousal. It fuses artistic public masturbation and experimental orgasm research. Although an artistic music and dance performance employing PLAY ME breaks several taboos, it is non-explicit. PLAY ME registers and records several psycho-physiological signals like ECG, EEG, heart-rate, blood pressure and skin conductivity in order to sonify sexual arousal. In sex science however, pulse, galvanic skin response are the common variables to quantify sexual arousal. The unique feature of PLAY ME is that it focuses on measuring pelvic muscle tension by way of a pneumatic anal pressure sensor. Thus, it is completely gender-neutral, since all sexes show characteristic involvement of the pelvic floor when significantly aroused. The diagrams that visualize pelvic muscle tension are the only reliable and fake-proof indicators for an orgasm. In the sonification that is essential for PLAY ME, we map anal pressure and contractions to pitch to make sexual arousal and orgasms audible in an agreeable and stimulating way. The PLAY ME performance is centered around two or three gender-neutral subjects who all use PLAY ME and interact. Dressed in catsuits and a helmet with a metallic visor they look like cyborgs or human machines. Over large distances, they participate in each other's arousal, exchange non-physical musical caresses and perform a duo or trio of bliss. This way, PLAY ME functions as a bodily extension as well as an artistic system that makes the emotional and erotic connections between performers tangible by music and showcases the human body as a musical instrument.

KEYWORDS Performance, sexuality, arousal, anal, probe, sonification, music.

LIVE PERFORMANCE WITH PLAY ME

In Germany, any kind of sex performance with the intention to earn money is forbidden by law. The legal framework mirrors the code of ethics inherent in German culture up to now: sexuality is strictly speaking seen as part of the individual domain (as opposed to the public domain). As such, sexual acts are destined to take place in privacy between two people. Although Germany has a reputation of sexual liberty, to exhibit sexual acts in public is as taboo as watching them, and transgressions are treated as criminal offenses. (Erregung öffentlichen Ärgernisses §§ 183a, 184 ff) As social practice, this applies to all countries in Western Europe and is even stricter in Eastern Europe. In contemporary Germany it may be no problem to kiss, hug and hold hands in public, no matter what gender participants are as long as they put their relationships on display in big cities, but not in small towns or the countryside, where social norms are harsher, gender roles more old-fashioned and a display of one's orientation or sexual preferences is not socially tolerated to the same extent. Sexual behavior such as kissing, hugging etc. may be regarded as harmless everyday behavior in big cities, but is much rather seen as an indecent expose of one's sexuality in the countryside. Even in Berlin, gay couples and trans-persons have been attacked and been beaten up for only walking the street or holding hands, and the number of such brutal bodily injuries are increasing.

Nevertheless, sex-performances as art in front of an audience are common practice in big German cities, but the vast majority of them still takes place in the subcultural underground scene. "Sex bleibt – vorder- und hintergründig gleichermaßen – im Verborgenen (...)." (Schiel, 2020: 33) If they are not presented as art or something alike, they risk being evaluated as obscene, dirty, shameless and indecent. "Sex performances vollziehen bei physischer Ko-Präsenz des Publikums explizit sexuelle Handlungen, die in anderen kulturellen Zusammenhängen von der Bühne verbannt, also obszön sind." (Schiel, 2020: 18)

PLAY ME is centered around the concept of gender-fluidity, based on the vision of a society in which gender is no longer a clear-cut category. Thus, the PLAY ME performance turns the performers into cyborgs, whose individuality is wiped out to a large extent by the costume and by shielding their faces as well as by using only sparse lights. They can only be distinguished by the color of their suits and by visuals that are projected to the walls in order to show who of the performers is currently communicating with whom.

Cyborgs they are since PLAY ME functions as a bodily extension, otherwise they are reduced to communicating by music/sound only. They share their sexual arousal with the audience, which may culminate in orgasms, but in a completely non-explicit way, that turns their sexuality into an object of scientific and aesthetic interest. PLAY ME aims at subverting the stereotypical concepts about gender roles in sex and it unmasks the porn- and sex-toy industry as affirming the bluntest sexual clichés. PLAY ME was invented to abolish sexual domination; it is the first device that may be used as a sex-toy that does not function in only one direction. PLAY ME makes the idea that there has to be a donator and a recipient void, for its feedback structure allows that both sides give and take.

SCIENTIFIC BACKGROUND

In their ground-breaking publication *Human Sexual Response*, Masters & Johnson (1966) explained the sexual response cycle plausibly, but reduced it to corporeality and physiological changes. Their four-stage model of sexual response has become wide-spread knowledge about human sexuality.

Meanwhile, orgasm research has developed much further and a wide range of methods is employed. Nowadays, researchers measure the pulse-amplitude, heart rate, skin conductance, blood-pressure and breath-rate and record them for a gender-neutral quantification of corporal effects during sexual arousal. Even Masters & Johnson (1966) already used cardiac rates, but all these parameters do not allow an accurate identification of an orgasm. It can only be identified by a clear-cut pattern: Irrespective of gender, orgasms coincide with rhythmic contractions of the pelvic muscles. These contractions cannot be seen at any other incident. In a clinical context an orgasm is defined as the “sudden discharge of accumulated sexual tension during the sexual response cycle, resulting in rhythmic contractions in the pelvic region” (Wikipedia, 2019). The easiest and gender-neutral way to capture the activity of the pelvic floor is the use of anal probes (Bohlen & Held, 1979).

ANAL PROBE

Anal probes are used in sex research just because they are gender-neutral. A second reason is the strength and power of anal contractions compared to vaginal contractions (Bohlen, J.G. et al., 1982). Some probes contain microphones, some use photoplethysmography and others have integrated force-sensitive resistors. Orgasmic contractions can clearly be identified by an EMG of the internal anal sphincter showing sharp regular signal peaks as can be seen in Image 1.

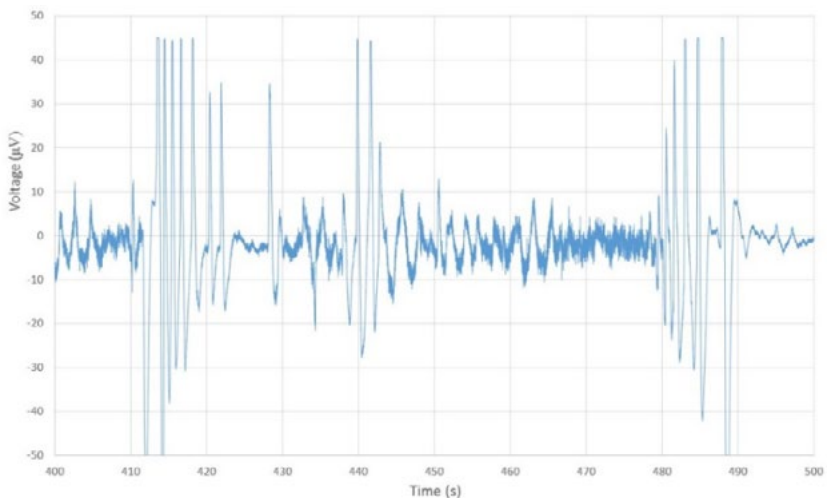


Image 1. EMG of internal anal sphincter. © Courtesy of the authors.

But increasing muscle tensions does not appear to deliver increasing signal voltage. It may appear as higher frequencies of the signal. This can be seen in Figure 1 between 450 s and 480 s. This signal behavior makes an easy evaluation of muscle tensions difficult. Another drawback is that condoms may cause problems, so good sanitizing is essential when the probe is used more than once.

In 1979 Joseph Bohlen and James Held developed “an anal pressure probe for monitoring vascular and muscular events during sexual response”. In their illustrated paper the construction of the probe is described carefully. However, it appears to be complicated to build it with only basic skills, which might be the reason why it was not used very often in other labs. Nicole Prause, PhD, a sex researcher from LA, was thus on the lookout for a better version of this pneumatic anal probe. It should be cheap, easy to build, easy to handle and reliable. She looked for someone who is familiar with *Arduinos*, sensors, 3D printing and able to construct a pneumatic anal probe and found Rudolf Arnold.

In January 2018 he developed a 3D-printed probe with the help of *Autodesk 123D Design*. The probe's shaft provides mechanical counter-pressure and a secure placement for the inserted tube. The 4 cm length of the shaft is based on the probe design of Bohlen and Held (1979). A downloadable STL file for 3D printing of the shaft and a short description how to build the probe can be found on Thingiverse (2019). We employed a silicone tubing of 1mm x 3mm and a differential pressure sensor to measure pressure changes. In order to maximize the contact area of the probe within the anal canal the tube is coiled around the probe. Secure threading is provided by three small holes. The shape of the head allows easy insertion and extraction. After passing the anal canal it is placed in the rectum without discomfort. Expelling is prevented even if the sphincter muscles contract very strongly. The silicone tubing is attached to the upper inlet of an MPXV7002DP differential pressure sensor. It is mounted to a breakout board that is connected to an analog input of an Arduino®. The arrangement is illustrated in Image 2.

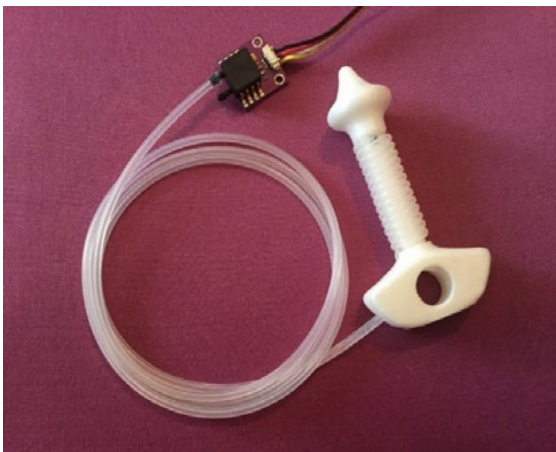


Image 2. Anal probe and differential pressure-sensor.
© Courtesy of the authors.

Sensor signals were evaluated using a Teensy 3.2 board connected to a computer by way of a USB connection. The differential pressure sensor was connected to analog input A0, the pulse sensor to A1 and the skin resistance sensor to A2. Image 3 shows an example of the resulting diagram.

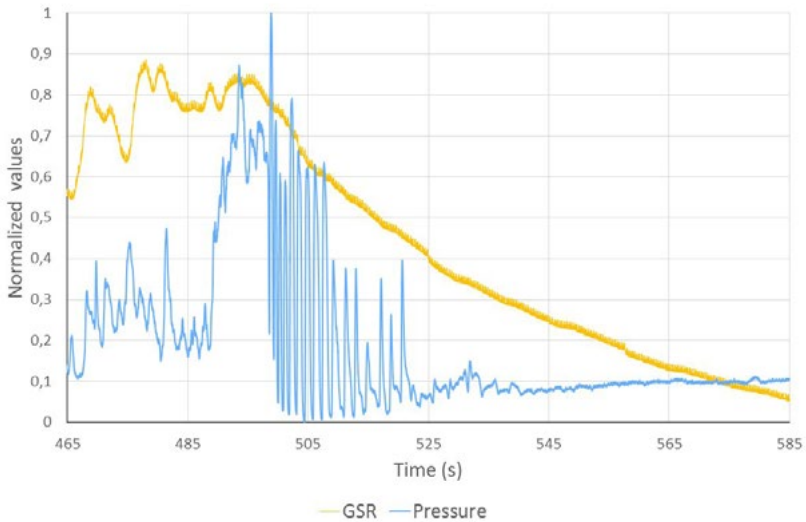


Image 3. Pressure of internal anal sphincter and GSR normalized. © Courtesy of the authors.

Pelvic muscle tension measured by internal anal sphincter pressure increased up to the onset of orgasm at 498 s. There were 16 regular contractions until the end of the orgasm at about 524 s. The increase of the intervals is in full accordance with the results of Bohlen and Held (1979). Galvanic skin response decreases continuously from 496 s until the end of the recording at 565 s. This shows that an orgasm leads to a significant relaxation.

MUSIC

The relations and interactions between music and emotions, between composers, musicians and listeners have been discussed and pondered about by music philosophers, neuro-scientists and other academics for a long time. An extended debate can be found in Michael Huppertz (2003). He notes: “It will be demonstrated which qualities make emotions musical and which make music emotional. Emotions and music may interact as scenarios and »scenic objects”. Finally: What about the reality of musical emotions?” If sexual interactions between lovers can be regarded as scenarios, there is an interaction between emotions and music provided by PLAY ME. Another “review of the current state of investigating music-evoked emotions” is presented in a paper by Hans-Eckardt Schaefer (2017).

SONIFICATION OF SEXUAL AROUSAL

Sonification converts sensor data into music. In short, sonification is “... data-dependent generation of sound, if the transformation is systematic, objective and reproducible, so it can be used as scientific method.” (Hermann, 2008)

The prototype version of PLAY ME uses sensors for pelvic muscle tension, pulse amplitude and galvanic skin response. The sensors are connected to analog inputs of a Teensy 3.2 and their data are converted to digital values and broadcasted via a local wireless network using the OSC protocol. Open Sound Control (Freed & Schmeder, 2009) is widely used in experimental music to control hard- and software synthesizers, visuals and even kinetic art.

For PLAY ME the data for sonification are mapped in a simple way. As illustrated in Image 4, higher values lead to higher pitches of tones on a synthesizer that is controlled by OSC messages. The audio output of the synthesizers is connected to a mixing desk.

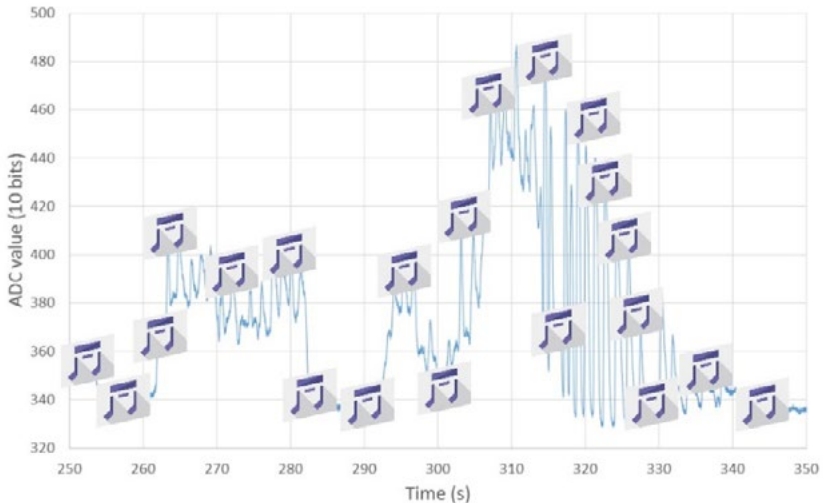


Image 4. Mapping of pelvic muscle tension to pitch. © Courtesy of the authors.

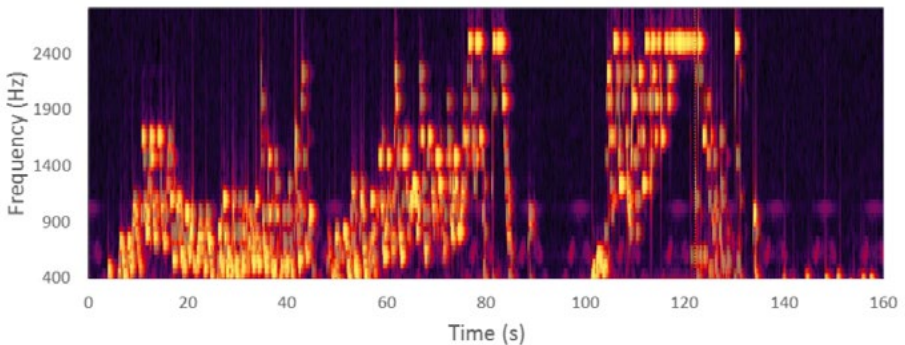


Image 5. Time-frequency spectrum during 3 short masturbation episodes. © Courtesy of the authors.

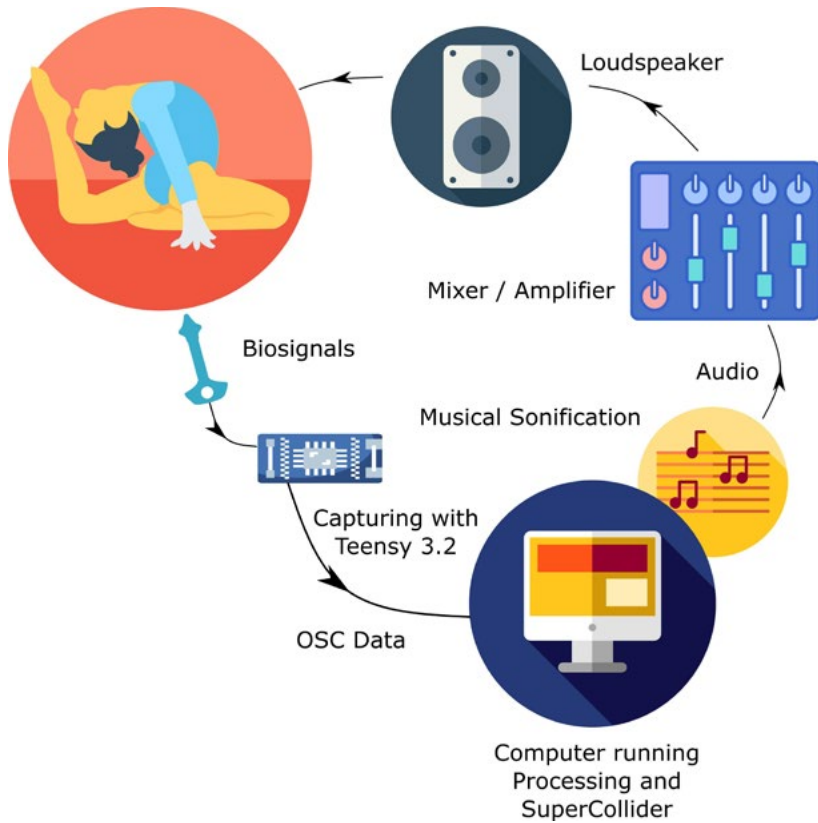


Image 6. Prototype arrangement for the sonification of sexual arousal. © Courtesy of the authors.

The time-frequency spectrum of the sonification of anal sphincter tension during three short masturbation episodes is depicted in Image 5. A higher level of anal sphincter tension equals higher frequency, more brightness indicates a higher amplitude. The spikes depict pelvic muscle tension as a degree of sexual arousal. Note that spike level stays very high between 112 s and 122 s, creating a steady high pitch induced by very high arousal. This equals the plateau phase described by Masters & Johnson (1966). At 122 s the orgasm starts, which can be seen by a fast decrease of spike level. The recording was made using the prototype arrangement shown in Image 6.

This way, the sonification has an impact on emotions, which is the striking new contrivance of PLAY ME, for it creates a feed-back loop. So far, all devices that have been used for sexual stimulation of oneself or another subject have always worked in one direction only. The motivation behind the idea to use sonification was the realization that feedback processes are essential to all sexual activities.

CONTROLLING STIMULATORS

If artificial stimulators like vibrators, pneumatic actuators, electricity etc. are used for sexual stimulation they can be controlled in different ways:

1. Manually: By joysticks, rotary controls, sliders and more
2. By movement: By different sensors integrated in wearables
3. By data from color sensors, solar wind satellites and radio telescopes
4. By music and sound played by instruments or generated by computers

Controlling Stimulators by Sound and Music

The main concept of PLAY ME is the combination of music-controlled vibrators attached to the inside of the catsuits/spacesuits and the sonification of biosignals during sexual arousal. PLAY ME can be used alone, with another person playing the synthesizer and thus the cyborg, or by two or more persons using PLAY ME devices over a local Wi-Fi network or the internet for erotic interaction.

The idea to control vibrators by music was introduced more than ten years ago by a commercial sex toy called OhMiBod®. Currently, there are improved wireless versions with apps available on the market. Most of those so-called mp3 vibrators are made for women, but there are also a few ones for men. Employing an Arduino® compatible microcontroller and commonly available electronics turns the PLAY ME into a do-it-yourself construction, that is affordable and easy to operate. One only needs a transistor, a diode, a resistor and some wires and a microcontroller. A more secure and versatile version uses a so-called motor-shield. The easiest scenario to use PLAY ME is that the person wearing the vibrators and sensors also plays music as shown in Image 7. The aim is to let the partner or an audience hear what kind of music one prefers and to find out what reactions can be provoked.

In performances, the synthesizer can be played by a second person. It might be replaced by sound generators controlled by sensors like gyroscopes, color and more. Image 8 shows a PLAY ME scheme for two dance performers. A similar arrangement was indeed used for an experimental music performance. In this event, the mixer was connected to a big audio system. The musician playing the synthesizers wore a stethoscope microphone to also make his own arousal audible by heartbeats.

Making Stimulation Audible

There are many ways to get sexually stimulated, not only vibrators: Masturbation, manual stimulation by a partner, dancing in extremely tight clothes, pneumatic actuators and so on. These methods can also be made audible (and visible) by using conventional microphones, contact microphones and piezo-microphones. They can be directly connected to audio equipment or sampled and transformed. In addition, vibration-sensors and movement-sensors can be used for sonification. It is also possible to control any stimulators in feedback loop.

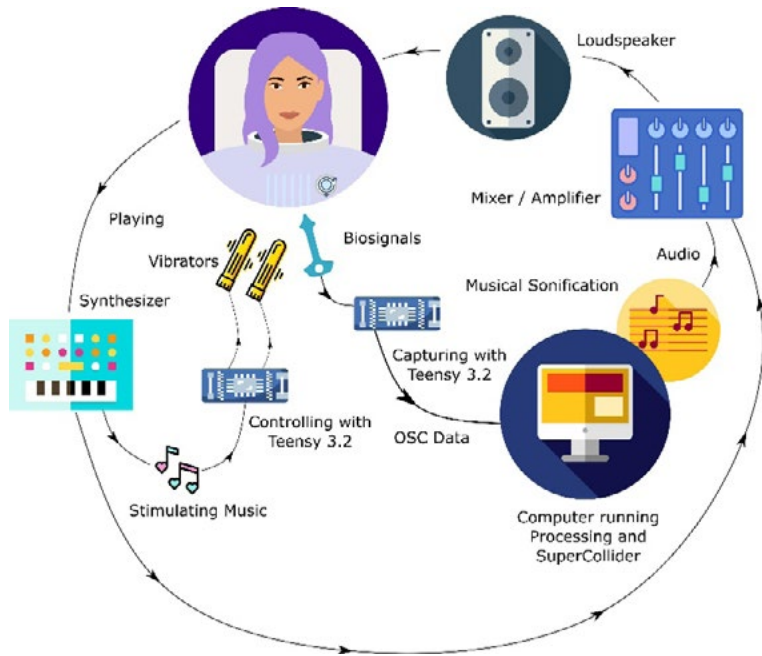


Image 7. Single user scenario. © Courtesy of the authors.

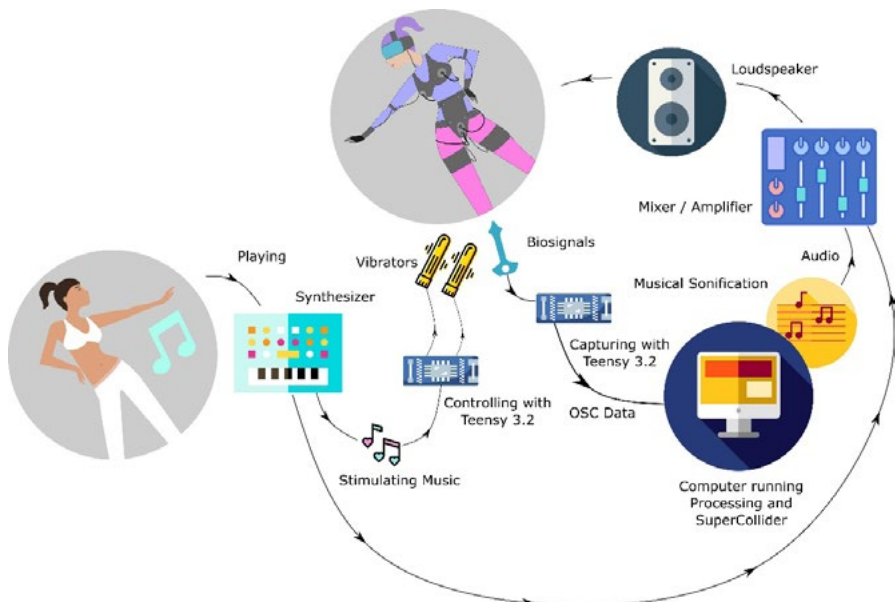


Image 8. Dance performance using one PLAY ME arrangement. © Courtesy of the authors.

PLAY ME PERFORMANCES

PLAY ME grants interplay: one person listens to music and thinks about a distant partner and the distant one to the music produced by the first one's sexual arousal. Music stimulating the body and music produced by the body can be modified and used in any desired way to create highly personal interactions. Thus, people can share sexual experience although they may live continents apart, if they exchange each other's sonification. It can be a way of remote love making.



Image 9. Performer wearing cyber-wings. © Joachim Seidl.

We suggest it is employed in a theatrical performance in the shade with sparse lights, preferably in a club. Nudity or explicit actions are out of question. Two or three performers wear a skin-tight catsuit or spacesuit with vibrators underneath. The vibrators will be driven by the other performers, either by playing music on a synthesizer or by using a joystick. The faces will be shielded by a helmet with a metallic visor. An example is shown in image 9. The performers may stand, sit or dance. They will also use environmental data like field intensity via a Wi-Fi access-point nearby and their musical voice will be illustrated by video projections.

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Tabooing Womanhood? Performative Strategies of Subversion

ABSTRACT

The artistic usage of menstrual blood still breaks cultural taboos, provokes strong emotions and reveals patriarchal structures of discrimination. The Australian performance artist Casey Jenkins combines strategies of activism and crafting to question gender topics through her body. The following analysis of her performances concentrates on gender performance and different views on gender, menstruation, work and media. The human body, with all its existential matters, is still an important tool to discuss social, political or moral norms in arts and society. Like courageous activists and artists demonstrate, bodily acts are targets for hatred but they can also be used as weapons to subvert hegemonic structures. In the last years the importance of breaking the taboo of menstruation has become an important discourse in society and politics, to try to enable girls and women worldwide to menstruate in a healthy way.

#BlessToBleed. #BloodNormal #periodpositive #MeToo

KEYWORDS Casey Jenkins, Casting Off My Womb, Bad Blood, body art, menstruation, craftivism, gendered taboos, gender performance, subversion

INTRODUCTION

300 million women and girls menstruate daily. For many of them it is impossible to do so with dignity (Laudien 2020). During the 1980s scientists were convinced that the menstrual taboo in Western societies is closely related to ignorance (Knegendorf 1985: 140). Back then menstruation was still tabooed and surrounded by curious folk myths concerning the impureness, fragility and weakness of women or the toxicity of menstrual blood (Hering & Maierhof, 2002: 7). For centuries menstruation was one of the points of attack for shaming and discriminating against women in patriarchal systems. Meanwhile the close connection between social mechanisms of exclusion and period poverty has been recognized in politics. This is mainly due to feminist movements, which fought over decades for the demystification and acceptance of menstruation in society.

One of these activists is the Australian artist and craftivist Casey Jenkins who discovered menstrual blood as a material in her performative artwork. By addressing the menstrual taboo, she provoked active reactions among recipients, which grew larger and larger through media outlets. Although she was confronted with hate and misogyny on social media she set a public discussion in motion. The performance analysis of *Casting Off My Womb* (2013) and *Bad Blood* (2017) by Casey Jenkins focuses on aspects around corporality, temporality, spatiality and materiality.

CASTING OFF MY WOMB

In October 2013 the artist spent an entire menstrual cycle performing at the *Darwin Visual Arts Association*, a small gallery in Melbourne. Casey Jenkins was sitting on a black box, knitting for 28 days with wool coming out of her vagina. Depending on the phase of her menstruation the white merino yarn was soaked with her menstrual blood and changed its color. During this long durational performance Casey Jenkins created a 15-metre-long knitted scarf which serves as a visual medium materializing time and space of a whole menstrual cycle as a corporal act. She uses her vagina as a performative space.

By giving birth to a piece of handcraft, she establishes a close connection between her body and the female connoted technique of knitting. She underlines the constructiveness of gendered bodies as well as gendered artistic materials and techniques. The overemphasis on femininity can also be understood as a parodistic appropriation. By breaking with the long tradition of cultural associations between soul/male and body/female Casey Jenkins questions these constructions from a queer, nonbinary and gender related perspective. This results in a simultaneous survey of gender hierarchy and misogyny in the context of gendered attributions: “As in the existential dialectic of misogyny, this is yet another instance in which reason and mind are associated with masculinity and agency, while the body and nature are considered to be the mute facticity of the feminine, awaiting signification from an opposing masculine subject. As in that misogynist dialectic, materiality and meaning are mutually exclusive terms.” (Butler, 1990: 37).

By identifying herself as a queer person Casey Jenkins transgresses ideas of female representation in a “heterosexual matrix” (Butler, 1990: 35ff.). This also speaks of the invisibility of female queerness in society and opens questions about traditional ideas of reproduction or family patterns. The artist takes a closer look at this subject in her recent work *IMMACULATE* where she is documenting her self-insemination as a mode of conception (Jenkins, 2021).



Image 1. *Casting Off My Womb* by Casey Jenkins, performance/installation image, DVAA Darwin, 2013 - © Casey Jenkins

Feminist Body Art

In her first gallery based performance piece Casey Jenkins centered her body as a possibility to explore gendered identification processes of female bodies “with whims and vulvas and breasts” (Jenkins, 2020) and how these bodies are treated in society: as a site of feminist issues but also as a target for misogyny. She speaks about her own experiences through her own body, without undermining the experiences of transwomen or transmen (Jenkins, 2020). Her work can be seen as a revival of *body art*¹, concerning a profound element of corporal life: menstruation. The reactions of the audience must be seen as a transgressive process, which includes transformative aspects of medial reception. Furthermore the performative body can be understood as an autopoietic system that constantly interacts with its reference systems like audience, culture, nature, society, etc. Inscripting themselves as experiences and bringing them forth through their normative forces (Schaufler, 2002: 42).

From a feminist point of view, body art can be seen as a tool to deconstruct gender roles, stereotype images of women and patriarchal structures in society and the art world. Social grievances were not only publicly negotiated, but became physically and/or psychological tangible for the recipients. In the tradition of a *feminist avantgarde* (Grzesyk, 2015; Schor, 2016) the female, performative body can be understood as materialization in time and space, which configures a female subject. This performative process includes the contextualization of different realities of women from an intersectional perspective. Some of them focus on their own body, others on the body as a corporate one, independent of the approach as an *objet d’art*.

Performative bodies are closely related to the performativity of gender because they are acting out and repeating constructs of femininity or masculinity. But there is also the possibility of an ironic approach, which can be seen as an instrument of (identity) politics. Especially in arts, boundaries of gender performance are transgressed and extended, which opens a space for performative subversion (Butler, 1990: 129ff.).

Working Activist Body

Although the performance was very slow in itself, the artist was active. She describes her time in the gallery as relaxing, having a good time while knitting and chatting with the visitors (Jenkins 2020). The image she evokes, reminds of grannies sitting on a bench in a village, talking to the neighborhood while doing handicrafts.

Her knitting body is a working body. In her *Manifesto for Distraction Art 2019* Casey Jenkins refers to Mierle Lanerman Ukeles’ *MANIFESTO OF MAINTENANCE, 1969!* (1969). She thus follows her radical performances and feminist activism contextualizing power and authority in an art museum

¹ In 1975 the term body art emerged, originating from the exhibition L’Art corporel and characterized by French art critic François Pluchart. The first manifest of body art (premier manifeste de l’art corporel) describes the body as a determined basic element of human life, including pleasure, suffering, illness and death. All experiences are inscribed in the body which shape and change the individual in order to submit to ruling powers and ideologies. (Pluchart, 2002: 242).

as well as domestic maintenance work. “Who does the housework?” was and still is a fraught question of democracy but in the 1960s it was definitely not a subject of the arts. Craft, as well as care work, can be seen in a similar position of disdain as a result of patriarchal structures. This underestimation of mostly female connoted and unpaid workload has achieved a new visibility since the corona crisis.

To get involved in activism is linked to the impulse of wanting to change things. It was important for Casey Jenkins to exert a positive influence on the political climate in Australia. “I started doing some sort of pranks and stunts and things with the purpose of trying to agitate to have that government voted out” (Jenkins, 2020). As a craftivist she used the female connoted technique of knitting and transferred it into something “explosive”. In 2007, Casey Jenkins and Rayna Fahey founded the Craft Cartel “to honour and subvert making techniques associated with women.” (casey-jenkins.com 2021). They knitted bombs and dynamite in pubs as an event, bringing people together. The relationship between dangerous, high explosive objects and the soft, female connoted technique of knitting provides an ironic approach, which is politically relevant and simultaneously disarming. In *Casting Off My Womb* Casey Jenkins generates this field of tension in a more abstract way. The visibility and usage of menstrual blood in public is so simple but as explosive as bombs. “Ce qu’il est. – Le corps est le donné fundamental.” (Pluchart, 2002: 242).

Gendered Temporalities

Due to being live, *Casting Off My Womb* establishes a bodily co-presence and generates an autopoietic feedback-loop between the artist and the visitors (Fischer-Lichte 2006: 114f.). The performance touches various stages of *female temporalities*: The menstruating body of the performer represents an important temporality in connection to the fertility of a woman. The 28 days of knitting in the gallery are equivalent to the artist’s period, a specific rhythm that accompanies a woman from menarche to menopause. The phases of not bleeding, bleeding and not bleeding anymore are marking different stages in life according to fertility. In *Casting Off My Womb* these individual temporalities and images of women were brought together. Within the context of life experiences and female power, she wanted to make people question their assumptions about bodies (Jenkins 2020). But it can also be seen as a matter of female representation in society with the risk of getting caught in stereotypes of social reduction to reproduction, caring or MANpower to maintain the system. No matter from which perspective it is looked at, *Casting Off My Womb* provides an ironic approach to the image of femininity in society and thereby leads to rethinking gender roles. All these aspects are materialized in a 15-meter-long knitted scarf.

Menstruation Space

By establishing a performative space and filling it with her own experience concerning menstruation, she follows in the footsteps of a feminist art practice which was initiated by Miriam Shapiro and Judy Chicago in 1971. Both of them were convinced that women had not been given the same attention within culture

of that time (Harper, 1985: 762). They realized the first feminist art program at *Fresno State College*, which resulted in the installation *Womanhouse* (1972), a performative multi-media art piece in an abandoned mansion in Hollywood where they discussed subjects like motherhood, birth, sexual abuse, menstruation, caring, or house work. A whole house was transformed into a performative cosmos with different rooms, installations, discussions, performances, etc. The critical questioning of social norms as well as the parody and subversion of female stereotypes were core aspects of this art program.

Judy Chicago contributed the installation *Menstruation Bathroom* (1972) with regards to women being discriminated against in the home environment. The installation consisted of used and unused hygiene products, which were placed in a white bathroom. A dung bucket filled with bloody sanitary towels and tampons was next to the toilet and there were bloodstains on the floor. Ever since then menstrual or period art has been established as a method of feminist art/activism to question misogyny and patriarchal structures and to overcome the cultural taboo of menstruation.

ON AIR

After *Casting Off My Womb* was completed, the public television channel SBS broadcasted the report *Vaginal Knitting (The Feed)* (2013) and published an interview with Casey Jenkins online. What she didn't expect was the fact that this broadcast went viral on social media and caused a tidal wave of reactions with more than ten thousand comments of which most were abusive and questioning the performer's sanity or hygiene. By transgressing the gallery's boundaries through media coverage, the *dispositif* of the performance changed, causing the artist's subject construction to falter. This insane feedback loop impressively displays that the artist has transcended another taboo: being present as a woman in public sphere and dealing with social media, a new playground of hate and humiliation.

Reality replaces fiction and challenges the audience in the gallery as well as on TV and social media. This matter gains in importance in a media-savvy society where perception and self-awareness tend to be seen through Instagram filters. People have gotten used to seeing blood on television and in cinema since the late 1950s². Splatter, horror films or martial arts: these forms of cinematic bloodshed are part of pop culture and can be experienced even more closely in various video games. Here we are in the field of fiction. Australians could see menstrual blood for the first time when a short report about Casey Jenkins performance *Casting Off My Womb* was broadcasted on TV in 2013. This fact was so baffling for the artist that she decided to go on air. Six years later *Libra*, a producer of sanitary products, released the campaign #BloodNormal where they depicted menstrual blood in an advertisement on Australian TV (The Guardian, 2019). They were heavily criticized for showing a realistic scene and not using a blue, clean or transparent liquid.

² Hammer Studios used red blood in their films first in the late 1950s.

Evoking and provoking the audience with the usage of different bodily fluids has been a popular method of artists since the late 1950s. Pierro Manzoni sold his shit in cans (1961), Andy Warhol pissed on canvas (1977-78), and the Viennese Actionists used them all: blood, sperm, vomit, etc. They penetrated the Western art canon and are still celebrated heroes, representing a patriarchal art system, described by Amelia Jones as “Pollockian performative” (Jones, 1998: 55). At first glance, *Casting Off My Womb* can be interpreted as a counter position to this traditional image of masculinity. Due to the medial transformation and the active participation of the audience on social media, she provoked a behavior, which can be attributed to toxic masculinity.

MENSTRUAL TABOO AND SHAME INDUSTRY

The menstrual taboo is still severely embedded within cultures and societies, connected to strong feelings of shame, insecurity and embarrassment. Breaking the silence and the power of shame in relation to the taboo of menstruation is vitally important precisely because it has to be liberated from the sphere of euphemism. According to Judith Butler’s psychoanalytic references³ menstruation marks a blank space in the semiotic dimension of everyday language. There’s a lack of symbolic power as in the sense of a *feminine locus*. (Butler, 1990: 79). Therefore it is all the more important to break this social power of *omerta* and to liberate the monthly recurrent event of menstruation, which is banned from public into private bathrooms. And even there it is treated as a problem, which should not exist as Judy Chicago’s installation *Menstruation Bathroom* showed. It can further be connected to mechanisms of control and pressure to function in neoliberal and capitalistic societies between self-optimization and exploitation under deplorable conditions. In 2019, the Indian journalist Roli Sriastava revealed that women workers in the state of Maharashtra are pressured to have their wombs removed. As many of these women suffer from menstrual cramps, they are able to work harder after the surgeries (Srivastava, 2019).

“Shame is an industry and the currency is clicks”⁴ (Lewinsky, 2015). Women who are fighting for their rights are intimidated and threatened all over the world. Public humiliation is a popular method of tabloids and has become a long tradition as countless contemporary and historical examples show. The entrenchment of misogyny and sexism as a constant program is part of a system that still guarantees higher sales figures and a greater circulation volume. The disseminated misogyny in social media, especially against women in public positions, reached a new peak in the last few years. Since then, social media has brought the situation to a head, which led to systematic harassment of

³ Julia Kristeva and Jacques Lacan.

⁴ Monica Lewinsky, who engages nowadays as an activist against cyberbullying, was one of the first targets of a cycle of media, political and personal assault during the communication boom in the late 1990s. The affair with her boss and then-President of the US Bill Clinton put her in the public eye, causing her to be berated not only by the media, but also on the street by passersby (TED, 2015).

women and hate crimes against them (Citron, 2014). Due to the fact that *Casting Off My Womb* went viral in social media and was picked up by a tabloid, Casey Jenkins was confronted with her own experiences of a mob invading her private life.

Social media has changed the relationship between the private and public sphere. The private having become seemingly transparent, resonates in the public and the boundaries of their spheres blur into one another. The artist has become fascinated by mechanisms of shame and tried to document and negotiate them in her performance art: “repressive controls in society are done through the power of shame” (Jenkins, 2020).

BAD BLOOD: UH, YUK, GROSS

“The ubiquity of gendered abuse on the net is disturbing, but also potentially transformative.” (Jenkins, 2016).

Bad Blood (2017) by Casey Jenkins is a knitted installation, made of merino yarn and menstrual blood, which was first exhibited at *London Science Gallery* in the *BLOOD: Life Uncut Exhibition*. Although it is an independent artwork, there are close connections to *Casting Off My Womb*. The same materials are used, but the corporality of the artist vanishes. The artist’s body is only present as a blood trail, replaced by written language of her haters. Casey Jenkins stated that *Casting Off My Womb* “had gone off in the world and become something else. But then I wanted to take ownership.” (Jenkins, 2020). In the same year the #metoo-movement was sparking a widespread debate about structural abuse, the craftivist filtered out the 30 most common used words from those 10,000 social media comments she was confronted with. Among them: gross, sick, what?, shit, wrong, etc. (casey-jenkins.com 2020). On the one hand she wanted to document this phenomenon and on the other hand prove that she hadn’t done anything shameful (Jenkins, 2020) so she created a three by two-meter large curtain, knitted by using merino yarn that was dyed with menstrual blood. It can be interpreted as a consequent answer from a self-proclaimed rabble-rouser: fighting back countless attempts of intimidation and recapturing her own artwork.

Casey Jenkins has brought the feminist theory and practice of *écriture féminine*⁵ into the present social media world through the inscription of her female body in the form and content of the installation. She is not afraid to open up gender discourses through her body, creating an immense autopoietic-feedback loop, which influenced her own privacy and life. By creating this performative chain reaction, Casey Jenkins gives us deep insights to the actual relationship between womanhood in public, media and society. In relation to the different levels of reception there is an intense potential of transformation in *Casting Off My Womb* and the genesis of *Bad Blood*.

5 The term was coined by the French post-structuralist Hélène Cixous in her 1975 essay *The Laugh of the Medusa*. *Écriture féminine* emerged in the mid-1970s and was developed by Hélène Cixous, Monique Wittig, Luce Irigaray, and Julia Kristeva.



Image 2. *Bad Blood* by Casey Jenkins - textile installation image, Science Gallery London, 2017 - © Richard Eaton.

Speaking about menstruation, vulvas, vaginas and female genitals in general, can be seen as liberation from a male colonialization of the female body. Besides performative approaches, there are more artistic practices needed to communicate femininity and the female body in an empowering way. It is time to overcome this fear and to continue the de-tabooing of menstruation. And to give Casey Jenkins the last word: It is time to “explore the possibility of rebooting the system” (Jenkins, 2016).

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Censored Bodies and Bodily Functions in Dimitris Kollatos's early Films

ABSTRACT

This paper focuses on two early films by Dimitris Kollatos that were subjected to government censorship: the short film *Olive Trees* (1964), which provides a cruel depiction of the Greek countryside, unearthing the financial dependence and sexual abuse of women by the patriarchal Greek family, and the feature film *The Death of Alexander* (1966), which takes place at a hospital and deals with the last days of a young man dying of leukemia. The paper examines the reasons behind these state censorial interventions paying attention to “taboo” images and words that refer to the body and discusses how Kollatos’s work attempted to stretch the limits of the representable and the speakable in relation to sexual desire, biological functions and bodily praxes in the Greek art film of the 1960s.

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KEYWORDS Bodily functions, film censorship, Kollatos, obscenity, sex, taboo.

INTRODUCTION

Dimitris Kollatos is a Greek filmmaker and stage director who, from the 1960s to the 1980s, built a controversial artistic identity based on bold subject matter and recurrent confrontation with censorship. This paper focuses on two of his early films made in the 1960s that notoriously caused discomfort to the audience and became targets of government censorship: the short film *Οι Ελιές* [*Olive Trees*] (1964), which was banned for almost 18 years, and the feature film *Ο θάνατος του Αλέξανδρου* [*The Death of Alexander*] (1966), which was severely cut. Both films were based on real stories and were adaptations of Kollatos's earlier works – “Οι Ελιές” [“Olive trees”] and “Στο νοσοκομείο της Val-de-Grâce” [“At the Val-de-Grâce Hospital”] respectively – included in his collection of short stories *Οι Ελιές* [*Olive Trees*] (written in 1964 [Kollatos, 2007] and published in 1965) dealing with sexual desire, marriage, homosexuality, crime and death. The paper examines the reasons behind both public disapproval of, and state censorial acts against Kollatos's two films paying attention to taboo images and language that refer to sex and the body, which were perceived as obscene and offensive material.

OLIVE TREES: SEX, MONEY, AND THE TRADITIONAL GREEK FAMILY

Olive Trees is from the point of view of a repressed woman whose internal speech, in the form of a voice-over narration, unfolds the traumatic events of the story, while explaining her melancholic thoughts and hurt feelings. Through the topics of the dowry and the “marriage of the sister” – the social obligation of the male members of the traditional Greek family to arrange the marriage of their sisters in order to free themselves to make their own family – *Olive Trees* deals with the patriarchal structure of Greek society, the lack of female self-determination and the link between family and financial interest.



Image 1. The intimidating suitor eats and drinks in a repulsive manner.
© Courtesy of the author.

Set in a village on Crete, the film opens with an outdoor dinner at a house yard where two brothers and Giorgis – the rich, brutal and intimidating suitor – eat and drink in an uncivilized, repulsive manner (Image 1). The sister, who is neither beautiful nor very young, serves wine or stands in silence, anxiously observing the men and patiently waiting to take orders. In the past, the brothers had tried to marry her to another villager, but the wedding was canceled as they did not give a field of olive trees as a dowry. According to their plan, when the suitor becomes drunk, he is carried to a room and the sister is forced to join him in order to lose her virginity. In the next morning, by tradition, Giorgis will be bound to marry her or die and the brothers will keep their property.



Image 2. The woman reluctantly obeys and enters the room.
© Courtesy of the author.



Image 3. Giorgis wipes his nose with his hands. © Courtesy of the author.



Image 4. When she bends to take off his boots, he violently kicks her bottom.
© Courtesy of the author.



Image 5. The woman appears half-dressed. © Courtesy of the author.

While one of the brothers is waiting outside the door, the woman reluctantly obeys and enters the room (Image 2). Guarded by her brother and under the gaze of Byzantine icons and a picture of a brave ancestor – a provocative indication to the triptych “motherland – religion – family” that constitutes the official patriarchal and nationalist value-system of Greek society of the time – the woman is treated in a brutal manner by Giorgis, who wipes his nose with his hands (Image 3), vomits, and asks her to help undress him. When she bends to take off his boots, he violently kicks her bottom (Image 4) and orders her to take off her clothes. Giorgis, however, is too drunk and, after humiliating her, falls asleep. With short

dialogue, austere form, realistic setting, dark cinematography, prolonged silences and explosive moments, and by focusing on the bodies, the gestures and the gazes of the actors, the film builds a hideous and claustrophobic world as it is experienced by the abused female.

The content and the aesthetics of *Olive Trees* caused stormy reactions by the public in the 5th Week of Greek Cinema in Thessaloniki where it was first screened in 1964. Although the Film Censorship Board granted *Olive Trees* permission to be shown in the festival's competition program, the Public Prosecutor intervened and banned the film, though it still won the first prize. The head of the jury, writer and academic Ilias Venezis, who disagreed with the jury's decision, refused to award prizes to the winners and make a speech at the end of the festival. Moreover the film did not receive official permission by the Greek state to be screened abroad. In the subsequent public debate in the press, and according to the explanations given by the censors, *Olive Trees* was seen as offensive to the country and especially to Crete, a region that bears strong connotations of national history and national pride, since the film linked acts of brutality and filthiness to obvious elements of Greekness, such as the traditional costumes, the olive trees, the wine, the notion of hospitality, the family table and even the local dialect of Crete (notably in a quest for authenticity the male characters of the film were dubbed with the voices of working-class Cretans [Kollatos, 2007]).

Moreover the theme of the woman as an object of financial exchange and sexual exploitation within the context of the domestic sphere was a taboo: Traditional Greek family was regarded as a prime source of moral order and the brothers – whose name and honor was linked to their sister's purity – as the guards of their sister's virginity. Such iconoclastic depictions alongside the emphasis on the filthy and violent behavior of the male characters – including real vomit (Kollatos, 2007) eating with hands, heavy drinking, loud laughs, the capsizing of the family table and the breaking of a chair – was a grotesque and spectacular deconstruction of the stereotype of the traditional Greek masculinity and at the same time of the symbolic value of the traditional family, the core institution of Greek society. The film came into conflict with the puritanism and the national feelings of both conservative and left-wing film critics, who reacted strongly. The latter asserted that it was necessary the social framework that supported such phenomena to be exposed, while also doubting that such things were representative of the Greek 'people' (Stamatiou, 1964; Moschovakis, 1964 and 1964)¹.

The film was also condemned as obscene because the woman appears half-dressed (Mitropoulou, 1964). Apart from nudity, however, what seems more provocative is that the film offers unusual space to the repressed sexual desires of the woman, highlighting the female erotic instinct as an animal-like and primitive need. So, before the heroine entering the room, her inner voice makes a provocative statement: "Seeing the donkeys copulate she has the sudden

¹ Nevertheless a number of distinguished film critics such as Rozita Sokou, Pavlos Zannas and Tonia Marketaki recognized the innovation, artistry and the audacity of *Olive Trees* (Sokou, 1964; Zannas, 1964; Marketaki, 1964). Similarly writer Lili Zografou of Cretan origin published an article praising Kollatos's work (Zografou, 1964).

wish to go out and find a man". Importantly also there is ambiguity about the real desires of the woman. She is repulsed by the man while also wanting to have sex with him: "He would only have sex with her when he was drunk" she thinks bitterly. Repulsion, desire and obligation are intertwined and when Giorgis falls asleep, she cries silently and ambivalently not only because of the humiliation, the failure of the mission and the fear of her brothers, but also for the indifference of the man and the lost personal opportunity.

What however was most blamable for most of the film's critics was the emphasis of *Olive Trees* on what was seen as vulgar, dirty and disgusting and at the same time its provocative, realistic representation. Sick "exposure of bodily functions, vulgarity and barbarism" (Papadopoulou, 1964), "full of annoying details, deliberately disgusting" (Stamatiou, 1964), "a display of sadistic atrocities, which cannot be written, let alone be seen" (Papadopoulou, 1964), were some of the comments of the film critics that drew a clear demarcation on what and how can be portrayed and exhibited in the cinema².

THE DEATH OF ALEXANDER: DEATH, BODILY FUNCTIONS AND THE MIDDLE-CLASS SENSE OF DECENCY

The Death of Alexander, inspired by the death of a Kollatos's friend that shocked the filmmaker when he lived in Paris (Kollatos, 2007), takes place at a hospital and deals with the last days of a young man dying of leukemia (Image 6) surrounded by his family and friends. The narrative alternates the bleak anticipation of Alexander's death at the hospital in the present with moments of a carefree and happy past, such as youth parties, discussions among the friends and Alexander's wedding.

When the film was first screened at the 7th Thessaloniki Film Festival in 1966, it caused disturbance to, and booing by the audience and film professionals as well. The head of the Festival's jury (and later Minister of Education), Ioannis Theodorakopoulos, left the venue in anger in the middle of the screening, while a lively public debate over the subject matter and the representational practices of the film took place in the press.

Two weeks later the Film Censorship Board approved the commercial release of *Death of Alexander* classifying it as suitable only to the adults, demanding also four scenes – about 20 minutes long – and one shot to be cut, because they were perceived as offensive in terms of visuality and language. The censored content included Alexander's sexual initiation at a brothel; his failed attempt to have sex with his wife at the hospital shortly before he died; two scenes (at a party and a café respectively) depicting Alexander's friends discussing their first sexual experiences and the sexual contact of hospitalized Alexander with his wife; as well as a dialogue-line at the end of the film which was condemned as scatological.

Similarly to *Olive Trees* it was both the content and the representational style of the film that were perceived as offensive since they attacked middle- and high class audience's sense of decency and good taste. The raw realism of the film places emphasis on the body by focusing on illness, nudity, sex, bodily

² For further details on the censorship against *Olive Trees*, see Chalkou, M. (2020).

performances and functions. In *Death of Alexander*, there is a persistent focus on dialogues and minor acts – often rather unpleasant – that foreground physicality and at the same time lie within the zone of privacy that the big screen enlarges and brings into the public sphere.



Image 6. The film deals with the last days of a young man dying of leukemia.
© Courtesy of the author.



Image 7. The indiscrete and detailed inspection of an injection.
© Courtesy of the author.



Image 8. Alexander undresses himself and remains with his underwear.
© Courtesy of the author.



Image 9. Sex was in inconceivable proximity
with the sacred subject of death. © Courtesy of the author.

A good example of this is the indiscrete and detailed inspection of an injection (Image 7), a medical practice that harms the body. Alexander's sexual initiation in a brothel is another such incident although neither overt nudity nor sex is involved in the scene. Nevertheless it was seen as insulting to the audience because of the depiction of Alexander undressing himself and remaining with his underwear (Image 8) with the camera recording in detail his intimate moment in a realistic and unflattering manner. In other words, the problem was that the film publicized the private, was it painful, ugly or embarrassing.

What, however, seemed to be sacrilegious breaking further the rules of the representable was the fact that the "dirty" human bodily functions and sex were in inconceivable proximity – side by side – with the sacred subject of death (Image 9): In the hospital, lying on his bed, Alexander flips through a book with illustrations depicting the sexual life of ancient Greeks. More provocatively, however, the film narrative blurs the boundaries between the matrimonial and hospital bed, when the undisciplined ill body denies passivity, hospital sterility and medical regulation by not preparing to depart this life but desiring sex in order to stay alive. Illustrative of the shock the film caused to its original, conservative Greek audience of the time is the angry statement of the head of the Festival's jury Ioannis Theodorakopoulos: "Even realism has limits. An ill man, suffering from leukemia, who is going to die in a few minutes, asks his wife to completely undress and he has full intercourse with her. These are beyond endurance"³.

Moreover in the film, death is not only connected with sexual performance but also with scatological material, which was unimaginable in the context of the Greek cinema of the time. At the hospital, when Alexander dies, a friend is obliged to hastily get out from the toilet. In the final scene of the film before returning to the hospital to collect his glasses, he says to another friend: "Besides, I forgot to wipe myself clean". The dirtiness of mentioning excreta in public profanes the sacred moment of the loss of the friend and seems disrespectful for the dead. According to columnist Theofylakos Papakostantinou in the right-wing newspaper *Mesimvrini* this reference was not simply a matter beyond aesthetics but also beyond normality (Papakostantinou, 1966). Importantly, after long struggles against the censorship of the film involving public protests of both Greek and foreign artists and intellectuals – such as composer Manos Chatzidakis, painter Giannis Tsarouchis, writer Antonis Samarakis, philosopher Roger Garaudy, film historian Georges Sadoul, actor and theatre director Jean Vilar and writer Claude Mauriac – published in the press, the Second Degree Board of Censorship revoked the decision and the film was released in the public venues without any cuts. The only part of the film that was not restored was the final dialogue-line, which was banished into oblivion forever (Chalkou, 2020).

Kollatos's early work attempted to stretch the limits of the representable and the speakable, in relation to taboo themes, in the Greek art film of the 1960s, coming thus into the conflict with the puritanism of the state Board of Censorship,

³ This statement is included in the promotional leaflet of *Death of Alexander* published on the occasion of its public screening.

the majority of the film critics and the audience. By demystifying the manners and values of the Greek countryside, and by foregrounding taboo behaviors, Kollatos transgressed the prescribed boundaries of the acceptable in relation to sexual desire, biological functions, bodily praxes, disease and language that challenged the sanctified spaces of the family, the nation and death. According to Kollatos “Art is a scandal. [...] It has to alarm the audience. [...] With my films I wanted to make the audience angry, jumping on their seats. I didn’t care that they stood up shouting. I wanted the audience to stand up and yell. [...] Art is provocation, conflict, a punch” (Kollatos, 2007).

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Breaking the Silence: Machine Learning Identified Taboos

ABSTRACT

Breaking the Silence uses machine learning methods to understand what are the contemporary taboo topics. News articles containing the word taboo and thus include overt references to contemporary taboo topics in today's press and the report of transgressions were collected from various online sources. The collected news articles are then grouped into topics using Natural Language Processing (NLP) methods which correspond to the identified taboos. Automatic text summarization techniques are used next to generate new articles. These newly generated articles underline the different taboos discussed at different times and the arguments for their creation, maintenance, or destruction. All the generated articles are presented as a news website which creates a user experience that challenges previous perceptions on how information on news websites is presented, structured and eventually trusted.

KEYWORDS Taboo, silence, machine learning, Natural Language Processing (NLP).

INTRODUCTION

A taboo is commonly defined as an action that is prohibited or restricted by social or religious customs. Moreover, a taboo is a topic that is often hard to discuss, other times unmentionable, and cases where it can even be considered unthinkable. Taboos are cultural productions, embedded socially and historically, that vary from one society to another, although some taboos can be regarded as universal. Taboos have been studied extensively from various disciplines. See for example Freud, 1955; Chambers, 1960; Ullmann-Margalit, 1977; Tetlock et al., 2000; Hechter & Opp, 2001; Farberow, 2013; Steiner, 2013.

The established social norms and taboos largely govern the behaviour and lives of a culture or society. Nevertheless, behaviours, societies, and in effect, taboos do not remain constant over time. Taboos are created and destructed through various processes in societies. Many might feel that currently there are almost no taboos left, at least in Western societies, since the breaking of a taboo represents an example of social progress. However, many examples of taboos existing today can still be found.

Artists commonly attempt to bend the boundaries, challenge, and confront conventions and taboos. Yet, we can still find very recent examples of artworks that have been banned, removed from exhibitions, and threatened with lawsuits. Such works dealt with religious beliefs, nudity, political correctness, sexual content, and many other topics that are contemporary taboos in many societies. Despite that, artworks have always contributed to making something previously unacceptable become acceptable through critical acclaim or sheer exposure.

Prohibition, shame, and guilt lead to silence that is used in societies to maintain taboos. However, how can one study taboos, their creation, maintenance, and destruction, if absolute silence is imposed on them? Exploring taboos is only possible when this silence is broken. The breaking of silence is observable and socially more significant as it indicates an ongoing related social process for creating, maintaining, or destructing a taboo (Jaworski, 1997). The work presented in this paper adopts the importance of the breaking of silence on taboo topics, and thus its title *Breaking the Silence*. Thus, *Breaking the Silence* aims to highlight and bring to focus what topics are currently discussed as taboos and additionally the arguments for the creation, maintenance, or destruction of a taboo.

METHODOLOGY

Firstly, *Breaking the Silence*'s underlying system requires a set of texts that refer to various taboo topics. For that purpose, news articles from all over the world, written in English and containing the word "taboo", are mined from various online sources. News articles were mined from Google News, the service by Google that aggregates news from worldwide sources using Python GoogleNews (Hu, 2020). These articles include overt references to contemporary taboo topics in today's press, as well as the report of transgressions. News articles can provide to the system a quite accurate sample of what topics are currently often discussed as taboos and, moreover, reactions from people, governments, and

other various organizations almost as they happen. Thus, the choice of news articles as input to the system as opposed to the choice of texts from scientific studies, for example.

The collected news articles are analyzed with Natural Language Processing (NLP) methods (Vajjala et al., 2020). NLP is an artificial intelligence research subfield that helps systems understand, interpret, and manipulate human language. The machine learning NLP methods utilized for *Breaking The Silence* were trained only for the English language. Accordingly, only news articles written in English were collected. All the models used in *Breaking The Silence* were implemented with TensorFlow (2021). Training of the models used was performed with the Reuters News stories corpus (Reuters Corpora, 2004).

The primary purpose of analyzing the collected news articles is to group them into clusters that correspond to the taboos identified by the system. Clustering is performed according to similarity and relevance based on the following features extracted from the analysis of each collected news article's text:

Keywords

identify the most relevant words and expressions from the text related to important facts, events, and relations,

Entities

identify named entities mentioned in the text such as person names, organizations, and locations,

Category

classify the text into a category according to the Reuters news taxonomy. The Reuters news taxonomy is a list of 103 topic categories as they were defined for the Reuters News stories corpus.

(Lewis et al., 2004)

The previously mentioned features were also used to discard collected articles that were not relevant to taboo topics; for example, articles referring to the board game Taboo or the TV series with the title Taboo. Finally, 1949 news articles posted online from January 2019 to September 2020 were collected and analyzed. The collected articles originated from 284 different media sources, including The Guardian, CNN, Reuters, The New York Times, Hindustan Times, South China Morning Post, Jakarta Post, and many more.

The text analysis of the collected news articles resulted in identifying 84 clusters shown in Image 1. The largest cluster is for the taboo topics related to women and includes 408 news articles. Clusters that correspond to the taboo topics related to religions (e.g., Islam, Christianity), countries (e.g., India, China), or persons (e.g., Donald Trump, Emmanuel Macron) were also identified. A cluster related to COVID-19 was also detected since news articles were collected during the pandemic outbreak.

Subsequently, a new article is automatically generated for each identified taboo topic. Automatic text summarization techniques are applied to the full

text of all articles in each identified cluster. The generated summaries form the text of new articles that articulate the discussion around each identified taboo topic. The applied summarization technique is extractive, i.e. the whole text is analyzed to identify important phrases, which are then rearranged and combined to produce a coherent summary.

The new article's title is generated by applying a simple random based technique on the cluster's concatenation of all article titles, the Markov implementation of a simple Markov chain generator (Singer-Vine 2020). Previously mentioned NLP methods are again used to detect the keywords, entities, and the category of the newly generated article. Finally, article images are generated by randomly selecting sentences from the text and feeding them to the Runaway Generative Engine (2020) that automatically generates synthetic images from text. The Runaway Generative Engine is deep learning generative based method (Xu et al., 2017).

Ultimately, all the generated articles constitute the website *Breaking The Silence*, available at <https://breaking-the-silence.online/>, designed in a familiar format for the viewers that is similar to most of the currently available news websites.

name of cluster	size	name of cluster	size	name of cluster	size
women	408	sexual abuse	29	Africa	15
sex	191	London	26	religion	14
menstruation	147	black people	24	alcohol	14
workplace	134	HIV	23	Israel	14
men	131	New York	23	Germany	13
India	129	France	22	Nigeria	13
mental health	99	Pakistan	21	Indonesia	12
money	77	sports	20	Nepal	12
islam	57	Australia	20	hindu	11
relationships	55	Christianity	19	disability	11
abortion	51	Donald Trump	19	beauty	11
death	51	Europe	19	animal	11
lgbtq	44	vagina	18	Ireland	11
UK	44	cannabis	17	Thailand	11
U.S.	42	porn	17	New Zealand	11
China	36	fertility	17	church	9
covid 19	34	tattoo	17	catholic	9
racism	33	divorce	17	Bollywood	9
god	31	art	17	Kenya	9
suicide	31	jewish	15	Iran	9
Japan	31	domestic abuse	15	faith	8

Image 1. The largest identified clusters corresponding to the most discussed taboo topics.
© Courtesy of the author.

IDENTIFIED TABOO TOPICS AND GENERATED ARTICLES

The methodology outlined in the previous section resulted in identifying 84 taboo topics, and accordingly, the same numbers of articles were generated. In the following, a brief overview of a few sample articles is given. All the generated full articles are available at <https://breaking-the-silence.online/>.

The article with the title “Period. – J. Blaming Women for Infertility in the #MeToo era How ‘Normalised’ is Sex before Marriage in Pakistan?” was generated from 408 news articles discussing taboo subjects related to women. The article includes many comments on menstruation-related taboos, especially in India and Nepal, fertility, miscarriage, abortion, and sexual desire, among others. Additionally, the appointment of the first woman with a high-ranking post at the Vatican is discussed, along with the taboo of women drummers in Kenya.

On the other hand, the article about taboos related to men with the title “Why men need to talk about their mental health” was generated from 131 news articles. The article focuses on discussions about men not talking enough about their problems or the necessity of talking more about masculinity. Other topics mentioned in the article include male circumcision and infertility, as well as the marketing of beauty products to men.

Another article generated from a big cluster of collected news articles is the one about topics related to sex with the title “Sex & condoms are not taboo so lets f*cking talk about it Be bold!”. The article discusses taboos about masturbation, porn, sexual abuse, talking about sex and many more.

The article with the title “Taboo around mental health is slowly changing in Black communities Financial Infidelity and Abuse Because of coronavirus we’re doing things differently” refers to taboos related to workplaces. It includes issues about women’s diversity and inclusion in the workplace, pay inequities, costs associated with menopause in the workplace, improving mental health care in the workplace as well as the acceptance of employees with tattoos or those who use cannabis, and many other topics.

Since *Breaking The Silence* data were collected during the COVID-19 pandemic outbreak, an article about COVID-19 taboos was also generated. The article’s title is “The Future is now says startups on how COVID-19 is changing our social world”. The article includes discussions on the taboo and stigma of those with COVID-19 and how new taboos were created like kissing and hugging. Moreover, there are references on how this pandemic reopened the discussion for taboo topics like masturbation, domestic violence, and mental illness. Furthermore, it is cited that it is taboo to allow the infection of those at very low risk for society’s benefit.

The generated article about art and taboos discusses artists’ works exploring mostly sexual taboos or extreme body modifications and the link of human pain to beauty, among others. The title of the article is “Art in the forbidden zone: Inside the Erotic Sci-Fi Grotto of Hajime Sorayama”.

Articles about countries or a few persons were also generated. India is the country for which most taboo topics were detected. The article titled “Understanding Menstrual Taboos in India” represents the vast discussion in India about menstruation taboos. However, the article about India also refers to the use of contraceptive pills, sex, LGBTQ issues, and taboos of the Sikhism religion about tobacco use, among others.

The generated article about China also includes taboo topics about menstruation, LGBTQ+ issues, and death. Moreover, it includes discussions about political issues such as urban depopulation or shrinking cities in China.

Another mentioned taboo is the use of nuclear weapons and how this taboo might have prevented states from using them and considering that this taboo might be broken in the future. This article's title is "Euthanasia is illegal in China and in most of the world."

Lastly, the article with the title "It remains taboo in the mainstream to label Donald Trump a fascist" was generated from articles about Donald Trump. The article includes mostly political issues like the collapse of taboos on issues of Israel's relations with the U.S., the taboo topics that Trump's presidency has brought into focus or the taboo of discussing his elections opponent Joe Biden's time in the Obama White House.

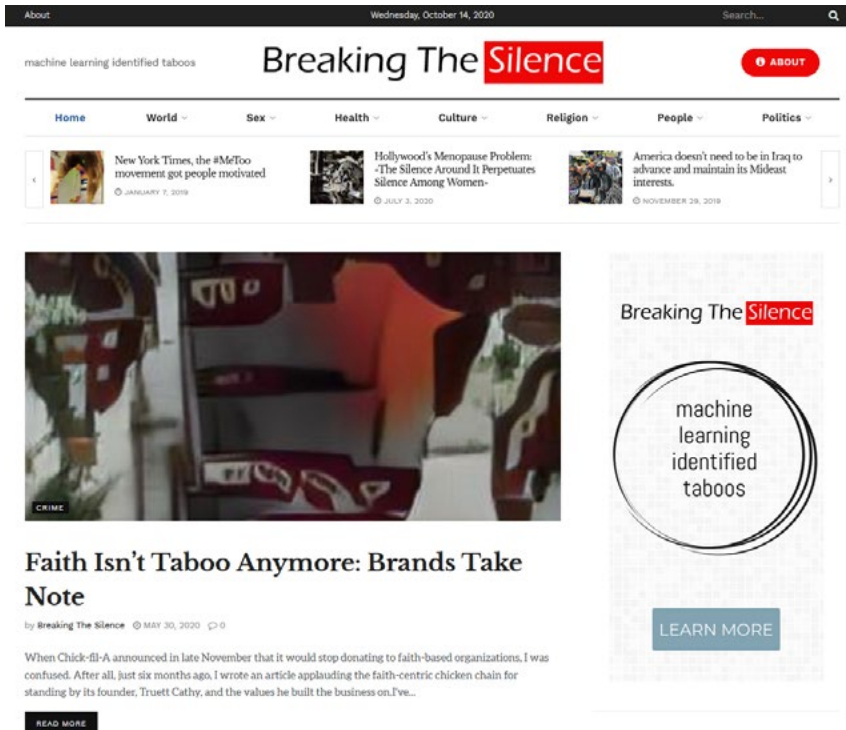


Image 2. The homepage of the *Breaking The Silence* website. © Courtesy of the author.

EXPERIENCE

Breaking The Silence is presented and can be experienced as a news website. It is designed in a familiar format for the viewers that is similar to most of the currently available news websites. User experience studies on the quality of news websites utilize measures for evaluating trust, usability, appearance and loyalty (Aranyi & Van Schaik, 2016). These dimensions are implicitly transferred to *Breaking The Silence* viewers since it was chosen to be presented with a

news website format. An exception is the loyalty dimension which refers to how often users return to the same news website to stay informed, which cannot be applied to the *Breaking The Silence* website.

In many cases, the trust of news websites is based on previous knowledge and perceptions of users, which in the current era of “fake news” is very important. However, if users have no previous knowledge or experience of a news website, trust is based on the perceived usefulness of the provided content. In this case, users evaluate whether they believe that the website provides truthful and reliable information and eventually if they trust the website’s journalists’ competence and the information presented. *Breaking The Silence* challenges all these perceptions about trust since all the content was automatically generated using machine learning methods even though it is based on “real” content collected from various news websites. However, users are not aware of the sources and the full content utilized to generate each article presented on *Breaking The Silence*.

The usability dimension on news websites refers to how easy it is for users to find the information they are looking for, navigate to the website through categories, and search for content. Studies on websites’ usability commonly refer to the issue of the “perceived disorientation”, the tendency to lose the sense of location on a website, as one of the most common problems faced by users navigating through hypertext. News websites generally have a complex hypertext structure, and *Breaking The Silence* has adopted the same structure even though it actually contains only 84 articles. *Breaking The Silence*, although it is presented as a news website, it has not the same usability goals. It utilizes the commonly expected organization of content in categories, hyperlinking content with tags, and the website’s search function to disorient, to some extent, users purposefully. Through a seemingly complex structure, the users’ slight disorientation is utilized as a method for them to explore and navigate through the various taboo topics presented in *Breaking The Silence*.

Lastly, the news websites’ appearance dimension measures how clear is the formatting of articles and other content. The articles on *Breaking The Silence* are formatted using all the usually found guidelines for news websites. The content of the articles includes images and highlighted excerpts. Furthermore, the articles’ content is disrupted by presenting other related and recommended articles that enhance the desired users’ slight disorientation, as previously mentioned. More importantly, in the case of *Breaking The Silence*, the content of articles are automatic summarizations with rearranged and combined sentences from many source articles. Thus, in some cases, the articles’ content might not appear as coherent as in the case that the summary was human-generated. However, this perceived shortfall can lead users to make unexpected connections between the different issues presented in an article.

CONCLUSIONS

The presented work, *Breaking The Silence*, uses machine learning methods to understand what are the contemporary taboo topics. It aims to highlight and

bring to focus what topics are currently discussed as taboos. The presented methodology for automatically generating summarizations from many collected news articles seeks to underline the different topics discussed at different times and the arguments for creating, maintaining, or destructing a taboo. Finally, the presentation of the generated summaries as articles of a news website creates a user experience that challenges previous perceptions on how information on news websites is presented, structured and eventually trusted.

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This IS NOT Irak.

ABSTRACT

During late 2019, early 2020, the author carried out field studies across the militarized zone and borders of Iraqi Kurdistan witnessing the trauma experienced by those who had direct contact with war, conflict, human trafficking, and human rights violations. This led to the creation of a digital multimedia archive; a collective memory which was photographed and filmed by Syrian refugees, in collaboration with the Kurdish authorities and the artist. These visual assets were later used for the creation of an immersive environment, a serious game which presents player with a therapeutical solution for post-traumatic stress disorder. This paper will discuss the field study, key artistic processes and collaborations which influenced the creation of the game environment.

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Thank you Amanj, Ayar, Dr. Laia, Psy. Laura and my wife Almudena, for your support, understanding and for letting me go into the unexpected.

KEYWORDS War, Diaspora, Trauma, Memory, Serious Games.

INTO THE KURDISH LANDS

Ever since I remember the Kurds have been fighting for their survival. Their diaspora is rooted in trauma, genocide, ethnic cleansing, parricide, silent voices and ever shifting borders, where the human condition is faced with resistance, resilience, and displacement. The endless fight of an ethnicity which is, like Hitchens wrote: 'homeless at home and stateless abroad' (Hitchens, 1998: 182).

In this paper the artist presents primary sources collected on-the-ground, in collaboration with Kurdish authorities and Syrian refugees in Iraq during 2019 to 2020. The data was collected at the end of American military ground support to the Kurds in north and north-east Syria and during the missile crisis between the US and the Shia-Iranian militias/Army, which led to the death of general Qasem Soleimani on January 3, 2020.

The paper proposes the creation of a database and archive composed of material filmed and photographed by young Syrian refugees, with the support of the artist. A collective memory which illustrates the contemporary Kurdish diaspora in the Middle East. It is a collective point-of-view account about the Kurdish resistance. Filmed, photographed, and documented by the refugees themselves, might be considered taboo imagery in the West. Yet what this evidence reminds us of, is that, despite humankind's capability of inventing ever more atrocious forms of violence, vicious complicity, and horror towards certain ethnicities, the oppressed and traumatized always find a way to survive and maintain their identity.

THE GEOPOLITICAL AND TRANSNATIONAL CONTEXT

*"To understand something is to understand its topography.
Know how to draw your map. And know how to get lost."
(Sontag, 2014: 24)*

At the end of 2019, the US administration led by Donald Trump carried out a radical change in its international geopolitical strategy. This change gave way to a new migration crisis in the Kurdish region of northern Iraq and North East Syria. The withdrawal of US troops fighting against Daesh in northern Syria meant that military and logistical support provided to its allies on the ground, the Kurdish forces and militias, stopped. A coalition which had been fighting the 'Islamic State of Iraq and the Levant' (ISIL) since 2014.

This withdrawal of human, technical and logistic resources brought along yet another military operation in the region. Codenamed 'Operation Peace Spring', the enemy on this occasion, were the Kurdish forces on the North and East Syria (Rojava).

Officially launched by land and air on the morning of October 9, 2019, it was carried out by NATO member-state Turkey with the support of Al-Qaeda linked groups and jihadi wolves: The Free Syrian Army (FSA).

'Operation Peace Spring' changed, once again, the cartography of the region. A +30 km wide and 444-480 km long 'safe zone' was created in the north of Syria, occupying Syrian sovereign land and neutralizing transnational

Kurdish rebel groups, like the YPG and YPJ-offspring from the PKK (Kurdistan's Workers Party) which had previously fought against Daesh. Considered as terrorists by NATO, Turkey, and the European Union. The military operation relocated internally displaced persons (idp) from the civil war in the so called 'safe zone' and blocked the entrance of Syrian refugees into Turkey via its southern border.

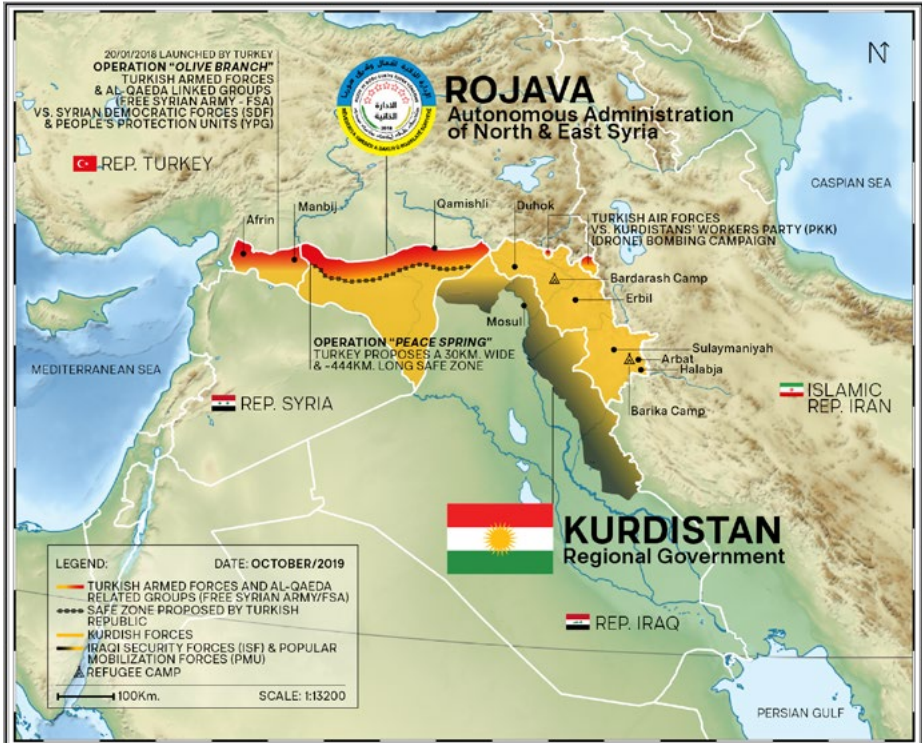


Image 1. Geopolitical map of Northern Syria (Rojava) and Irak (Kurdistan) in mid-autumn 2019.
 ©Miguel Oliveros Mediavilla.

Betrayed by their Western allies, the Kurds now faced a powerful and impatient enemy which disregarded Kurdish heritage, identity, and traditions; they were forced to create alliances with old opposing armies: the Syrian Arab Armed Forces and their allies the Russian Armed Forces.

This military operation undertaken by the Turkish Armed Forces and the Free Syrian Army against the 'de facto' democratic and confederal region of Rojava, their security forces and militias, led to a large refugee wave of native Syrian Kurds entering neighbouring Iraqi Kurdistan.

FIELD STUDIES

While this humanitarian and geopolitical crisis was taking place, the artist set out to conduct several field studies within the refugee camps of Bardarash and Barika/Arbat in Iraqi Kurdistan. His aim, to visualize and understand refugee life through the eyes of children and teenagers. To do that young Rojavan refugees were provided with multimedia and photographic equipment to record their experiences and give true insight into their daily lives and their personal points of view.



Image 2. Mohamed, a Kurdish Muslim refugee child from Rojava photographs her playing friends at Barika/Arbat refugee camp in Kurdistan, Iraq, December 29, 2019.

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Image 3. Mohamed, a Kurdish Muslim refugee child from Rojava photographs two brother friends at Barika/Arbat refugee camp in Kurdistan, Iraq, December 29, 2019.
©Miguel Oliveros Mediavilla.



Image 4. Mohamed, a Kurdish Muslim refugee child from Rojava photographs her friend at Barika/Arbat refugee camp in Kurdistan, Iraq, December 29, 2019.
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Image 5. Mohamed, a Kurdish Muslim refugee child from Rojava photographs her friend at Barika/Arbat refugee camp in Kurdistan, Iraq, December 29, 2019.

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Image 6. Mohamed, a Kurdish Muslim refugee child from Rojava photographs his friends playing Barika/Arbat refugee camp in Kurdistan, Iraq, December 29, 2019.
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TRAUMATIC CONSEQUENCES

The consequences of NATO's geopolitical strategy, in the northern Middle East, favours the ethnic and religious cleansing of the Kurdish ethnic group. The military campaigns launched by Turkey, a NATO member state, with the support of regional groups linked to Al Qaeda, the Free Syrian Army, seek to block migration and the flow of refugees to Europe, and as a result, it is a direct violation of numerous articles within the 1948 Universal Declaration of Human Rights. Including article 1 all the way to article 5.

The Turkish regime, its far-right policies, Islamization and its allies are implementing an expansionist and Islamist military policy. They seek to access the lucrative resources of the region, while oppressing the Kurdish population, making NATO, the international community and the European Union believe that what they are really carrying out is a fight against terrorism in the north of Syria and Iraq.

The resurgence of fundamentalist and ethnic nationalism is now a fact. This political ideology was born in Turkey at the beginning of the 20th century and it has been destroying the Kurdish identity and traumatizing its people since World War I. Despite this, no international body seems to be interested in finding a solution to such a complex phenomenon. As a result, the modern

foundations of ancient civilization are in state of irreconcilable trauma amongst themselves and each other.

COPING WITH TRAUMA THROUGH PLAY

Once I have given a chronological outline of the field study, the article will discuss how the primary sources collected on the ground, have been used to shape and develop an immersive experience, an environment and a serious game which presents player with a therapeutical solution for post-traumatic stress disorder. This mental condition is understood and characterized by:

“A. The individual has been exposed to a traumatic event in which there have been (1) and (2):

(1) the person has experienced, witnessed, or been explained one (or more) events characterized by deaths or threats to their physical integrity or that of others

(2) the person has responded with intense fear, hopelessness, or horror. (Note: In children these responses can be expressed by unstructured or agitated behaviors)

B. The traumatic event is persistently re-experienced through one (or more) of the following ways:

(1) Recurring and intrusive memories of the event that cause discomfort and that include images, thoughts, or perceptions.

(Note: In young children this can be expressed by repetitive play where characteristic themes or aspects of the trauma appear)

(2) recurring dreams about the event, which cause discomfort.

(Note: In children there may be terrifying dreams of irreconcilable content)

(3) the individual acts or has the sensation that the traumatic event is occurring (includes the sensation of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, even those that appear when waking up or becoming intoxicated).

(Note: Young children can re-enact the specific traumatic event)

(4) intense psychological discomfort when exposed to internal or external stimuli that symbolize or recall an aspect of the traumatic event”

(López-Ibor, 2002: 207-208).

This experimental research seeks to develop an immersive and reactive videogame, which helps the patient suffering from PTSD. The creation of this serious game and application, is being developed in collaboration with the “Department of Psychiatry and Clinical Psychology” of the Hospital Clinic of Barcelona. It is, in my opinion, an attempt into semi-automated “manipulations

of the mind and systems of influence” (Rousseau, 2012: 4), a game system conceptually rooted in the “hypnotic paradigm of art (...) and the principle of empathy” (Rousseau, 2012: 6-7). The video game and application are at early stage of development, despite this the author attaches a series of images that illustrate its creative process:



Image 7. Post-traumatic 3D virtual space I (2021). ©Miguel Oliveros Mediavilla.

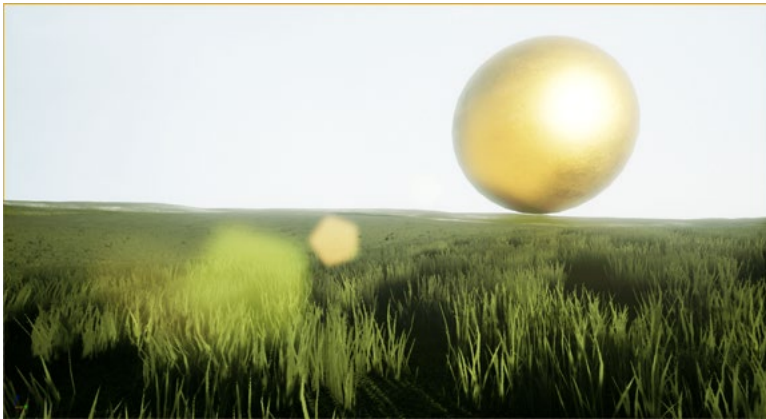


Image 8. Post-traumatic 3D virtual space II (2021). ©Miguel Oliveros Mediavilla.

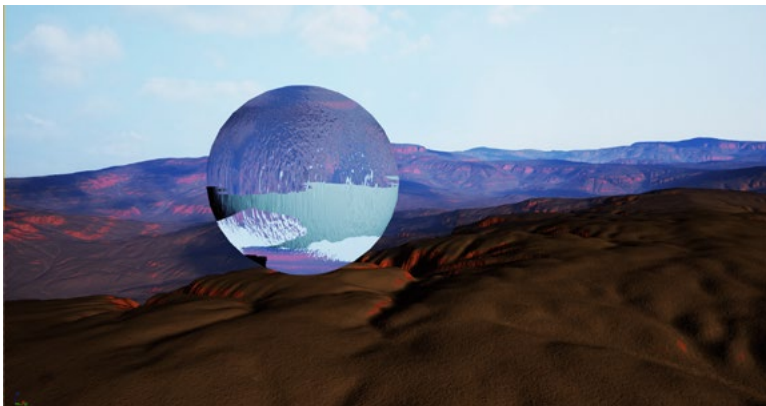


Image 9. Post-traumatic 3D virtual space II (2021). ©Miguel Oliveros Mediavilla.

Finally, I would like to mention that, although greater detail could be given into the making of the game, the design of the sound environment and how the narrative is being implemented and programmed according to rigorous medical advice and expertise. We are still developing the system, so until the piece is not completed, no detail account could be given. Yet what I can conclude, is that this transdisciplinary multiplatform project will help all of us, suffering from some minor or mayor form of PTSD.

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Entropy and Self-Organisation in Embryonic Development

ABSTRACT

This paper proposes that ontogenesis is a self-organising process in which the emergence of forms responds to a negative entropic development. This approach posits the dissolution of the boundaries between the definition of life according to which it opposes inanimate matter. Life, starting from the paradigm shift to the complex sciences, means a time-dependent developmental force that resists entropy and generates information. In this essay, the embryological process will be discussed from the perspective of negative entropy, based on the following points:

- 1) With a historical reference to research of embryology, the question of morphogenesis is critically addressed here. From this I argue that embryonic development is a process that cannot be reduced to a morphogenetic discourse.
- 2) Following epigenetic theories of modern biology, the thesis of ontogenesis as a self-organising process is presented.
- 3) The science of complexes describes life as a phenomenon resisting entropy. Embryogenesis is a self-organising process that feeds on negative entropy and generates information.
- 4) Recodification of life from the machine point of view of the formative forces at work in ontogenetic processes. The question is not what life is, but to what extent the notion of living processes are self-organising negentropic processes, which would deterritorialise the concept of life.

KEYWORDS Morphogenesis, Ontogenesis, Princip of Individuation, Entropy, Formation Force, Form/Shape.

INDIVIDUATION PROCESS:

MORPHOGENETIC DISCOURSE OF EMBRYONIC DEVELOPMENT

Embryonic development is the process of the formation of the ovum (from the germinal stage through embryogenesis to the foetal stage) until the expulsion of the foetus. Once the foetus has entered an extrauterine environment, it undergoes a radical transformation: The foetus becomes a being (Dasein), that is, an individuated subject brought into the world. Unbound from the mother's body, the new offspring attaches itself to the open world in which the formation of its forms of a strange world continues. Psychoanalysis describes this process as individuation. It begins at birth, at the moment when the perinatal dialectic (Saratxaga, 2019: 121-131) takes place and the subject enters into the dialectical paradoxes of separate attachments and linked separations. It is in the midst of the imagined space of the medial, this place where one is bound to reality through the media and at the same time, separates the self from it, that individuation takes place. By individuation, Carl Gustav Jung does not mean the emergence of new psychological patterns, but rather he refers to a process of differentiation by means of which the individual is formed, namely educated, in favour of the development of the individual personality (Jung, 1935/1975)

When does individuation begin and end? This naïve question poses a critical problematic for the anthropological discourse on the beginning and end of human life. If we do not limit the intrauterine morphogenetic process to human life but understand it across every form of life development, the question of the duration of individuation becomes a critical starting point for biology. Henri Bergson received the Nobel Prize in Literature in 1927 for his book *Creative Evolution*, in which he turned classical biology on its head with the question of the completion of the individuation process (Bergson, 1911: 109-117). Individuation is a process without beginning and without end.

Embryonic development is likewise inherent in the process of individuation, as this occurs in the irreversible course of time. The first phase of the development of the unborn child begins after embryogenesis in the cell development phase, consisting of the immediate division of the fertilised ovum: After the first division – the zygote consists of two blastomeres – further divisions continue and a cell cluster is formed, called a morula. This is followed by the embryonic phase, characterised by the implantation of the embryo. After this, the intrauterine formation of the organism is completed, characterised by the differentiation of the organs (morphogenesis) and the tissues (histogenesis) of the foetus.

Thus embryology serves the discourse of morphogenesis. Embryologists used to use it to describe the developmental process of a multicellular organism (the foetus) by investigating the formative cause of the formation processes of the fertilised egg. The pivotal point of this question was whether the intrauterine processes of differentiation, which are accomplished without externality, make use of an internal mechanical or necessary cause to explain natural phenomena (*causa efficiens*) or whether the phenomena derive from the effectiveness of purposeful or expedient causes (*causa finalis*).

This discussion concerns the philosophical problem of the relationship between cause and effect, namely whether an inner causative primordial form

constitutes the basis for the embryo's self-division or whether the embryo's self-fashioning is based on a process in which the components interact with each other, and new parts emerge from this interaction.

This discussion took two forms in embryo research: preformation theory vs. epigenesis. Until the middle of the 17th century, the early preformation theory (G.D. Aromatari, N. Hartsoeker, A. van Leeuwenhoek) dominated the theories of developmental biology. The preformists claimed that the formation of tissues and organs was preconditioned by a form. In the germ created in the sexual act, the whole organism was already preformed, so that morphogenesis consisted in the unfolding of the information hidden in the germ. The gender discourse of the preformation theory should also not be disregarded. The information of the whole organism is enclosed in the male sperm cells, which inform the material provided by women. The predestined form in turn goes back to a divine instance that contains all perfect and complete forms within itself.

The preformation theory remained dominant until it was refuted by the research of the embryologist Caspar Friedrich Wolff (1734–1794). Based on the work of his predecessor William Harvey, according to whom all living beings emerge from an initial state called “ovo” and whose formation is based on metamorphosis (reshaping, growth of parts) or new formation, Wolff proposed the thesis of epigenetic development. According to epigenesis, the shape of the embryo is caused by a drive triggered either by mechanical laws or biochemical compositions.

The old dispute between preformation and epigenesis was a dispute about natural philosophical interpretations of the development of individual life (Mocek, 1974: 40) Both theories differ in content, although both explain embryological process from a morphogenetic point of view. The morphogenetic interpretation is based on a hylemorphic understanding of embryonic development, according to which form (morpha) shapes matter (hylé). The form is the carrier of a determining idea and the matter, in this case the plasma, is an amorphous structure that can be reshaped by matter.

In my opinion, the morphogenetic question does not exhaust the problem of developmental embryology. This should be taken into account in view of a process of individuation for which the hylemorphic scheme seems insufficient. Firstly, because the change of form of a multicellular organism triggers a transformation of the totality of the same, and secondly, because ontogenesis adds a third value to form and matter: information.

In this essay I want to propose the thesis that embryo development is an ontogenetic process. Ontogenetic, firstly insofar as individuation takes place, which, however, is not completed, but continues unceasingly as long as there is time. And secondly, because individuation, as Gilbert Simondon has convincingly demonstrated, is preceded by a principle that makes it possible: the principle of individuation. This principle presupposes relationality and the relation to the environment as a condition of possibility for every process of differentiation. The formation of that form is preceded by relations, bonds. Such an organisation of assemblage are processes, whereby that single reality (onto) remains subjected to individuation in the becoming of time (genesis). Ergo, every individuation is ontogenetic (Simondon, 1964: 26).

ONTOGENESIS AS A SELF-ORGANISING FORMATION DRIVE

As early as 1885, the embryologist Wilhelm Roux criticised the germ-plasm theory, which was strongly influenced by the zoologist August Weismann and his preformation theories, by exploring embryological development from the perspective of developmental mechanics. According to Roux: “Developmental mechanics is the study of the causes of the formations of living beings, i. e. of the formative and form-maintaining mode of action, its causative combinations of factors and their effective variables” (Roux, 1985: 35). Roux investigated the driving forces and the causes of the development of a cell. He came to the conclusion that the shape and function of the cell is due to an interplay between plasma and genome, whose mutual influence can be explained by mechanical universal principles of attraction and accordingly triggers self-differentiation processes. Self-differentiation means that the alterations, the shape transformations, the emergence of new shapes and structures etc. are determined by the embryological field itself. Through a complex interplay between the genome and the plasma, different genes become active in the individual cell nuclei during the successive phases of germ development, resulting in different genetic information being passed on to the plasma and thus in differentiation of the cell. The zygote is a cell that undergoes a process of individuation. The formation of an embryo, as the result of a process of differentiation of a single cell, goes back to mechanical principles.

However complete and perfect the model of developmental mechanics may be, embryological developmental research pays no attention to external factors that might influence the developmental process. A mechanical model is deterministic in that the effect follows directly from the cause and any change in the system needs to be derived directly from the cause position. Accordingly, change and movement result without regard to the environment in which that organism finds itself.

Towards the end of the 18th century, an organic interpretation of the formation of living things emerged in contrast to the mechanical teaching of Isaac Newton that had prevailed until then. In 1791, the epigeneticist and natural philosopher Hans Blumenbach published the book *Bildungstrieb* (Formative Instinct), in which he identifies the organic formative force of living matter by the name “*nisus formativus*”. Among other forces, the formative instinct is a life force, a formative force, responsible for bringing forth the form and structure of cells. *Nisus formativus* corresponds to the organic version of Newton’s force, from which it differs in that organic life has an inherent self-organising force. *Generatio*, *nutritio* and *reproductio* are all modifications of one and the same force, the effect of which has in common that the cell differentiates and takes on different shapes. This means that the organism is subject to a self-generative process via differentiations. *Nisus formativus* is not a higher instance external to the organism, as was the case with the mechanical explanation, but the formative instinct is a force that creates the organism and is inherent in it.

The educational instinct plays a special role in Friedrich Wilhelm Joseph Schelling’s early philosophy of nature. Schelling’s *Ideas for a Philosophy of Nature* (1797) understands the organism in the sense of Immanuel Kant and

Blumenbach, as a union of nature and freedom, necessity and randomness, because an inner principle of randomness wrests the organism from the necessity of the chemical process. Thus, Blumenbach's writing announced the revolutionary step towards a principle that explains the freedom and randomness of organisms through a disturbance of the general formative forces of nature.

EMBRYOGENESIS IS A SELF-ORGANISING PROCESS

From thermodynamics to operational closure

Until the middle of the second half of the 20th century, the dispute between vitalists and mechanists remained unresolved. It is based on the classical separation of two disciplines, biology and physics, which are engaged in a new dialogue with each other in the context of the scientific paradigm shift towards complexity. Following the model of the classical sciences, organic matter is studied separately from inorganic matter. The new discoveries in embryology provide a more precise knowledge of the composition of the individual particles that make up microorganisms. With these discoveries, we have gained new insights into genetics in the context of synthetic evolutionary theories, such as population genetics, as a crucial contribution to DNA research. This branch remained attached to the prejudice of attributing life to that which is opposed to inanimate matter.

With the complex sciences (Prigogine & Stengers, 1980: 111) the separation between animate and inanimate matter is disintegrating and both biology and physics are combining them. This is a result of the new inventions based on the theory of thermodynamics. The world view of a mechanical clock has to be replaced with the cosmic image of a thermodynamic heat-power machine, which came about in the womb of chemical laboratories and in the field of physico-chemical reaction processes: combustion produces energy and heat causes a change in volume. This technical invention marked the beginning of the age of complex sciences. Complex because the study of heat presupposes the definition of the system, which is composed of a series of macroscopic parameters (temperature, pressure, volume, etc.) and framework conditions that must be taken into account. Whereas Newton's universality sought to demonstrate the eternal character of nature, which resembles a mechanical system, by systematically explaining all the elements it comprises according to mechanistic rules, thermodynamic systemic universality lies in the fact that the parameters of thermodynamic systems define macroscopic systems.

The young thermodynamics as a field of physics allows a new expression to describe the inorganic matter, but in opposite to organically structured matter. The Second Law of Thermodynamics states that in a closed system, namely in a system where there is no energy exchange, entropy increases. The conservation of energy is confirmed by the First Law of Thermodynamics. The transformation of energy is an irreversible process. The irreversibility of an equilibrium tendency of isolated systems is defined in the Second Law of Thermodynamics, for the calculation of which Rudolf Clausius used the concept

of entropy. In the new thermodynamic definition, physical systems are defined as closed, with entropy tending towards its maximum, and biological systems are understood as open, in which the release of heat or matter takes place and entropy decreases.

With the work of Ludwig Boltzmann and William Gibbs, it became possible to propose a statistical definition of entropy around 1875. Boltzmann first recognised the connection between the probability of a thermodynamic state and its entropy. According to Boltzmann's statistical mechanics, Clausius' irreversibility has to be interpreted as the expression of a change towards states of increasing probability. Boltzmann's "discovery," we might say, was to have found the expression of a growing molecular disorder in the irreversible increase in entropy. According to him, maximum probability corresponds to a state of the greatest disorder. Openness and closedness replace the opposition of vitalism vs. mechanism; a historically conditioned opposition of physics and biology.

Against the background of the inventions within the framework of the Second Law of Thermodynamics, Erwin Schrödinger formulated a new definition of life in his 1948 book *Was ist Leben? Die lebende Zelle mit den Augen des Physikers betrachtet* (What is Life? The Living Cell Seen through the Eyes of a Physicist). Life keeps itself away from maximum entropy "by continually withdrawing negative entropy from its environment" (Schrödinger, 1944/1989: 126): "What an organism feeds on is negative entropy. Or, to put it somewhat less paradoxically, the essential thing about metabolism is that the organism succeeds in freeing itself from the entropy that it must generate as long as it lives." (Schrödinger, 1944/1989: 126)

The geometry of life proves its absence of a state of equilibrium. Life strives for the formation of complex forms and shapes, in Schrödinger's words: against the decay into an unmoved state of equilibrium (Schrödinger, 1944/1989: 126). Life feeds on "negative entropy", since all metabolic activities of an organism require the decrease of entropy, because, as already mentioned, an exchange with the environment takes place. Schrödinger attributed a supernatural power to this, a "vis viva, entelechy" (Schrödinger, 1944/1989: 124). Entelechy remains as philosophical as it is hermetic in this author. However, he provides a clear indication of a neg-entropic formative drive that characterises life. Are there form formation or neg-entropic states in non-organically structured matter that is excluded from the influence of the environment? The problem of neg-entropy has not entirely abolished the old division between vitalists and mechanists.

Self-organisation and negative entropy

Neg-entropy only arises under ecological conditions. The biologist and zoologist Jakob Johann von Uexküll taught us the difference between environment and surroundings in his book *Umwelt und Innenwelt der Tiere* (1909). Environment, the literal translation of Umwelt, denotes that which surrounds the organism. Uexküll, however, understands Umwelt to mean the surrounding world that affects the organism and influences its living conditions, in which environment and organism form a unit.

Strongly influenced by the ecological theories of open systems, the theoretical biologist Ludwig von Bertalanffy wrote the *General System Theory* in 1949. Focussed on open systems, the system theory approach to biological processes produces new insights. Living organisms are regarded as systems because they are units composed of interactions that depend on time-dependent transformations as soon as there is an exchange of energy. The crucial question of *General System Theory* is how the system absorbs external influences and processes them.

To address this question, *General System Theory* uses a new field of research that emerged in the context of post-war communications technologies: cybernetics. This discipline of control and regulation of information systems was based in part on research into computations of unpredictable machines. In 1943, Arthuro Rosenblueth, Norbert Wiener and Julian Bigelow published the article “Behaviour, Purpose, Teleology” with which they introduced feedback mechanisms as a property that determines the behaviour of systems. Three years later, in 1946, the first of a series of ten conferences took place, at which McCulloch assembled a colourful and mixed group of scientists. The conference was entitled “Circular-Causal and Feedback Mechanisms in Biological and Social Systems”. In the Macy conferences, cybernetics established itself as a discipline of circular feedback mechanisms applied in social, biological and artificial systems. Circular causality is understood to mean operations in which the internal emergence of order is not imposed by external causes but is brought about by the system components themselves. Operational closedness is therefore not a characteristic but rather a constitutive principle of processes of self-organisation (Varela F. J. & Goguen J., 1977: 48-63) It forms a systemic unit; its organisation is circular and its structure closed to information and open to energy.

Ontogenetic processes are thus redefined by cybernetic operative closure. Ontogenesis is a process of formative power, i. e. neg-entropic, which leads to a structure. The thesis of the developmental biologist Wilhelm Roux, according to which the formation of an embryo is a process of self-differentiation, subsumes Blumenbach’s vitalistic assumption, according to which the *nisus formativus* triggers a self-organising developmental process. Now operative theories provide the explanation for self-generating structures: the morphogenetic differentiations act recursively and feed back into the environment in which embryo development is embedded. The self-organisation of matter is nothing other than the ability of special forms of the embryo to generate self-producing structures that result from defined interactions and linkages under strict adherence to given framework conditions. This happens because it is a system that is open to its environment (plasma) from which it feeds, so that energy is transformed into negative entropy, the information carrier and self-organiser.

The division between vitalism and mechanism, between organic vs. inorganic and biological and physical has been overcome with the intervention of communication theories. Systems, whether organised organically or inorganically, are operationally closed to information. This thesis of operational closure was at the core of the cybernetic style of thinking, the complex and hybrid historicisation of which passes through multiple paths and routes.

ARTIFICIAL LIFE: WHEN INFORMATION RE-TERRITORIALISES LIFE

Since the turn to thermodynamics, life has been relegated to negative entropy. However, communication systems are not only driven by energy and matter, but also by information. The paradigm shift to information-based or trans-classical technology means a new challenge to the definition of life. This has razed the wall separating it from physical closed systems. From this point of view, embryogenesis is not a process from which organised structures are excluded. Embryogenesis is an ontogenetic process in which forms emerge, differentiate and, contrary to the Second Law of Thermodynamics, give rise to information.

Ontogenesis and negative entropy

Thermodynamically, embryogenesis feeds on negative entropy. A biological system is an open dynamic system in that it maintains certain constants in relation to perturbations and adjusts these relations it maintains to the environment from which it draws its energy. This means that the formation of embryos fights against decay by producing information for the purpose of self-preservation of the system. Self-preservation and self-differentiation as an expression of negative entropy characterise the emergence of living systems. They describe a process of self-organisation.

Autonomy is the self-preservation of the respective systems, that is: when the system is capable of specifying its own regularity. This only occurs in the case of operational closure, since systems produce their own components with their internal system operations via recursive interaction movements. Operationally closed systems are communication systems, i. e. systems that are composed of information. What is information then? It is neither energy nor matter; it is a unit of measuring probabilities.

The mathematician and cryptologist Claude von Shannon, the founder of information theory, published the founding article of information theory "The Mathematical Theory of Communication" with Warren Weaver in 1948. In this text, von Shannon and Weaver proposed the thesis that information is an entropic signal. Entropy of information clearly implies a certain desirable uncertainty, i. e. the novelty of the message. The maximum disturbance of a signal corresponds to the greatest possible number of possible complexions with equal probability for all, since information is a calculus of probabilities and is accordingly accompanied by greater uncertainty. Entropy is a positive factor for measuring information.

Noise promotes message choice, so a greater amount of noise increases information possibilities. According to Claude von Shannon, entropy has a positive, system-enhancing effect on the freedom of choice of communication. A diametrically opposed definition, but a functional equivalent, is Norbert Wiener's concept, who considers information as a neg-entropic entity. In a cybernetic system, information is the reduction of uncertainty and insofar the reduction of freedom of choice; or in Niklas Luhmann's words: the reduction of complexity. Both views are complementary in regulation and control systems: disturbance increases the freedom of choice of information, as is thermodynamically the case in any open system. Information is a message of order, it is a coherent

structure with key functions, so that a communication system is created to organise the disorder, namely the entropy of messages in the system, that is, to transform it into order.

Deterritorialisation and reterritorialisation of biological systems

First, the generalisation of the concept of entropy to information systems deterritorialises talk of life. If life has to be called neg-entropic formation drive from the thermodynamic point of view, life as an information-producing, autonomous and autopoietic concept is dependent on some organisational structure. Autopoietic systems replace biological systems, so that this self-referential system which produces forms in itself produces new forms of life, namely develops in the course of time, has its own autonomy and regularity and maintains itself according to the internal regularity and regulation of the system. The model of the simple autopoietic system has opened up the discourse of artificial life.

Secondly, the question of embryogenesis is reterritorialised in a digital milieu. If we assume that living systems are information systems that give rise to their regulation, then in the same way we have to assume first, that a machine controlled by information systems becomes a self-organising organism, and second, that living systems become autopoietic machines.

The reterritorialisation question of embryogenesis in the digital milieu leads to the problem of artificial embryogeneses, which should be pursued with a critical eye.

Alberto Maturana and Francisco Varela participate in the debate on artificial life. With their bio-cybernetic theories, they oppose the approach of the dogmatic theories of cognitive science and the classical theories of artificial intelligence. This research, with Christopher Langton as its representative and pioneer, was about creating algorithmic models that simulate self-production in nature. If such an algorithm exists, it can be executed on a universal Turing machine. Artificial life is an emergent bottom-up process. This is contrasted by Francisco Varela's model of a simple autopoietic system, unfortunately ignored by science, which he worked out with his biochemical machines.

The expansion of the definition of life to this self-organising structure that is based on a principle of individuation and that has transcended the boundaries of the organic and the inorganic, is the merit of bio-cybernetic insights. Nevertheless, today the paths to the question of artificial life are so territorialised by computer simulation and bottom-up processes that their deterritorialisation remains the task of a systemic view of general ontogenetic individuation processes.

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Renegade Monkeys

ABSTRACT

This article focuses on a series of selfies taken by a Celebes Crested Macaque monkey who seized a camera from a human photographer and absconded with it. The monkey's smiling self-portraits appeared in the international press, sparking legal and public controversy around issues of copyright, royalties and fair use of the images. Arguably, the very fact of the debate is indicative of the breakdown of the traditional dichotomies that separate the human from the animal, the natural from the technological. It further calls for a reassessment of photography as a unique act that combines all these aspects and yields surprising definitions of agency and creativity. To this end, the article draws on the Vilém Flusser's philosophy (particularly the concepts of 'apparatus' and 'program') and develops these to examine the ways in which the automation of photography has changed our perceptions of intention, memory and agency to the point that we are all "monkey photographers."

KEYWORDS Philosophy of Photography, Vilém Flusser, Programme, Agency, Creativity, Negentropy.

It is commonly argued that unlike humans, animals will always retain some of the characteristics with which nature has endowed them. Animals that have been removed from their natural environment preserve their animality in zoos, for example. Similarly, animals that have been artificially inseminated preserve some natural attributes that humans supposedly no longer need. With minor editing, the above sentences could encapsulate the history of the theory of photography. Here, too, one also comes across poetic descriptions of an unbreakable link with nature, one that is sacred, embedded in vague descriptions of a mechanical, automatic, or causal relationship. For this reason, even contemporary orthodoxies have failed to abandon the belief that the photograph's main function lies in being a perfect illustration of aping: human action mimicking natural action.

But if imitative representation of the real world in art and literature, or mimesis, can be defined as the culmination of human creativity – as art historians have claimed since the Renaissance – then, arguably, animals may also exhibit creative agency, even when they are in their natural environment and have no artistic intent in a sense acceptable to humans, no need for intellectual property. The purpose of this article is to explore this circumstance, which, I argue, does not require or depend on subjective experience, but rather stems from agential functional states.

At the heart of this article are *The Monkey Selfies* – a series of head and torso photographs of a Celebes crested macaque taken in 2011 in a forest on Sulawesi Island, Indonesia. According to the story, the monkey created these photographs after having snatched a camera and escaped its owner, nature photographer David Slater. After Slater had retrieved the camera, he found some intriguing photographs on its memory card. The published photographs show the smiling face of a slightly greying monkey whose large amber eyes stare directly at the camera. In one photograph, the monkey is seen sitting on the ground while holding out its hand towards the camera, and the thick green vegetation in the background is slightly blurred, as per aesthetic conventions. (See image 01).

Upon his return to the UK, Slater, presuming he held the copyright to the photographs, licensed the Caters news agency to source the images to larger media entities. Shortly thereafter, however, Slater's initial presumption was contradicted by the claim that he did not actually take the photographs, even if he may have owned the camera with which they had been taken. Because they were taken by a monkey, the photographs were apparently not subject to the legal protections provided by intellectual property laws for the simple reason that a monkey is not, and cannot be, a legal entity capable of holding a copyright. Therefore, it was argued, the photographs belonged in the public domain.

Consequently, the photographs found their way to the Wikimedia Commons database, which stores various types of media on condition that they are not copyrighted. In spite of all this, Slater continues to publish the photographs on his website under another version of the story, according to which the monkey did not flee to the forest to photograph itself in glorious solitude, but rather

selfied in Slater's presence with the camera on a tripod. This claim has never been confirmed. A local tour guide who was present at the time "just happened to go off for a smoke" and could not recall the particulars of the event. However, to support his copyright claim, Slater now posts the images on his website with a watermark bearing his name. He even offers printed copies for sale that can only be purchased with his signature, and promises that 10% of the payment will be donated to the Sulawesi Wildlife Fund.



Image 1. Self-portrait of a female *Macaca nigra* in North Sulawesi (2011).
Wikipedia Commons

For the time being, different jurisdictions hold conflicting positions with regard to copyrights on works created by animals. To me, the most interesting question arising from this event is not about the copyright but the very emergence of a controversy over the matter, and the assumptions that motivate it. The controversy, it must be noted, concerns only the theoretical rights humans are willing to grant monkeys. Unfortunately, these rights are backed up by the implicit assumption that every human action necessarily demonstrates agency and is therefore potentially protectable by virtue of its inherent creativity.

Arguably, this incident requires that we restructure the complex relationship between animal and human, natural and technological in artmaking. Contrary to medieval iconography, wherein the ape holds a mirror in which a sinning man can recognize himself as an ape of God, here, the “mirror” which features an ape allows man to recognize that the “sin” lies in ascribing creative agency only to humans, whose actions, like those of apes, are not governed exclusively by intention.

Philosophies of photography turn the discussion of agency and creativity in surprising directions. At one philosophical pole are analytical descriptions of photography as prosthetic human vision. These are influenced, among other things, by early experiments in neurology, and some are also based on a particular experiment performed on a captive macaque called Blind Helen (Humphrey 1970, 1974). Helen, whose visual cortex had been removed, proved that despite her blindness she was able to “see”, or at least sense objects in her immediate vicinity. This ability, referred to as “blind sight”, reveals that primate research, as Mike Kelly argued, is all too often a theater that plays out contemporary conceits of the nature of human existence using monkeys as actors (Kelly, 2016). By extension, “blind sighted” viewers of photos “see” objects in photographs (Walton, 1984) despite their ostensible “blindness”. These descriptions, although they are not divorced from the traditional identification of vision as humanity’s main bearer of knowledge, do at least assume that other species are capable of a type of vision to which humans can only aspire.

The philosophy of Vilém Flusser (1920–1991) can be understood as a phenomenological extension of that empirical experiment. According to Flusser, human nature does not exist outside “natural” existence and certainly does not contradict it. “Traditional” definitions of humanity, Flusser argues, fall into two competing types of worldviews (or, in his own words, “cosmologies”): finite and causal worldviews (Flusser, 2011a). The finite worldviews are a reflection of religious, mystical, and pagan traditions in which humans and their world are always defined according to some higher purpose and goal. However, the ambiguity of that purpose and uncertainty about how to reach that goal make many hostile to both. The causal worldviews are an outgrowth of the natural sciences, in which every event is the effect of a definite cause and in turn, will the cause of a significant future effect. Every situation in the universe, and the universe itself, are the product of a previous state(s), and will necessarily be followed by situations that are its products.

In fact, it may be argued that the two types of worldviews suggest a comparable and perhaps identical linear structure, namely: purpose and goal, cause and effect. Furthermore, Flusser argues that although the two types seem to be contradictory one can live, in the absence of non-linear worldviews, simultaneously within two types of linearity: causal and finite reality. In this way, nature can be viewed from a causal point of view and culture from a finite point of view, so that the laws of nature that govern the actions of macaque monkeys are not valid with regard to humans, all of whom are assumed to be goal-oriented and to act purposefully.

Flusser's programmatic worldview liberates itself from this dichotomy altogether. In it, causal and finite linearity are no more than two dimensions out of an infinity of temporary states of an all-encompassing program that never ceases to expand. This program absorbs, retains, and redefines the previous worldviews. In this view, the world, or more specifically the entire universe, is a situation in which built-in and specific virtualities are realized through pure coincidence while other possibilities not yet realized may materialize by dint of similar coincidences.

With regard to photography, Flusser develops four major terms: image, information, apparatus, and program (Flusser, 2000). Explaining them may serve to clarify how and why "monkey selfies" are a common phenomenon in photography even though they are considered unusual. Note that Flusser makes a unique distinction between traditional and technical images, the first and most fundamental of which is the photograph. For the purposes of this essay, it may be argued that Flusser uses the term *image* in a somewhat Benjaminian sense and describes it as a magical event (Benjamin, 2008). The term *information*, as it appears in Flusser's philosophy, can be understood in a Shannonistic sense, as an event whose likelihood will determine its value (Shannon, 1948). For example, the appearance of the postman at the end of the street is not a unique event, but the appearance of a penguin tottering along the same street is an unlikely event and therefore more significant (Flusser, 1986). Next, apparatus and program are the most original and fascinating terms in Flusser's taxonomy. An *apparatus* is a complex mechanism a photographer must prepare before shooting, even though it is already prepared. In fact, the word apparatus is derived from the Latin word *apparare*, which means to prepare (Flusser, 2000: 21). Although the apparatus is founded on scientific principles and may therefore be structurally complex, using it is quite simple. However, Flusser does not accept Kodak's rhetoric as expressed in its slogan, "You press the button, we do the rest". Instead, he assumes that there is an interaction between the apparatus and user. Finally, the term *program* places photography within the broad cultural context of post-industrial production. It describes the totality of decisions that the apparatus is capable of making or is able to generate. In photography, the term also refers to all the possible decisions by the photographer, all of which are conditioned by the program. The apparatus will do whatever the photographer wants and instructs it to do, but the photographer can only want what the apparatus is capable of doing. One might say that the apparatus programs its user – be it a human being or a monkey – and that they are, to a large extent, but one function within the apparatus.

These terms lead Flusser to distinguish between three types of photographs. The first is photographs taken using fully automatic cameras. Contemporary examples can be photographs produced by NASA satellites, unmanned aerial vehicles, Google Street View, security cameras and various medical devices. The second type is popular or amateur photos, such as those produced using cameras, phones and other everyday devices. The third type is experimental photographs taken by artists and scientists.

The first type encapsulates information programmed by humans and implemented by the apparatus. The third presents information that the photographer is intended to encapsulate, whilst the intention may run counter to that programmed within the apparatus. The second type is probably the most confusing and fascinating of all. Common photographic devices allow us to produce more and more images. In fact, some devices even require it of us. Human society today cannot view the outside world, or even itself, without recourse to the camera and its photographic categories. Flusser called this phenomenon “photo-mania” (Flusser, 2000: 58). However, images created this way are not informative and cannot become such. In fact, the more they multiply, the less significant they become. One must really wonder whether most members of society are in control of the photos they produce, whether all members of society are human, and whether (or when) producing photos is a Pavlovian reflex. Clearly, some people have become an extension of the pushbutton on their photographic devices. Consider the accessory known as “selfie stick”. In the absence of a better definition, it is an extension of the photographer’s hand and at the same time an extension of the shutter release button on a smartphone camera. This accessory clearly demonstrates that in some cases, the photographic device does not function in the photographer’s service, but exactly the other way around.

Put differently, the information that some photographs encapsulate is not at all what the photographer may have intended but merely what the camera’s programmer (whose claim for “intellectual property” is by far the strongest) may have intended. Such photographs are latent options in the camera’s program realized by the photographer’s conditioned reflex. The result of this peculiar state of affairs is a continuous flood of inadvertently created images: a collective unconscious memory created by the camera. One wonders whether a photo album is no more than a repository of pre-programmed functions. Such interaction with information raises the suspicion that faulty photographs are the most interesting, for they owe their information content, in fact their very existence, to deviation from the program’s purpose, or even to what designers or programmers would call a mistake.

Now another aspect of photographic programs should be considered: the tendency to deviate from and even contradict human intent. How does this come about? And should such setups be feared or accepted? Note that every apparatus works automatically, even those that supposedly include a human component. Consequently, given sufficient time, every apparatus will work to realize all the options in its program. In doing so, as stated above, the apparatus is likely to deviate from its program’s predetermined scheme and reach a condition that may be understood or described as erroneous. However, Flusser points out, every program is subject to constraints imposed by a higher-level program¹, and in turn operates within a framework of a meta-program... ad infinitum. Therefore, a certain aberration in the performance of a particular

¹ In fact, in proper computer science terminology, it is higher-level programs that are governed by lower-level ones.

program may be understood or described as a not unexpected option within a higher-level program or a meta-program. And if, as Flusser argues, apparati tend to stray from the range of their program or from their humanly designed parameters, should such a runaway apparatus be called a “conscious monkey” or “a blind sighted monkey”? And what should the meta-program that controls it be called – “Lord of the Apes”?

The apparati called consumer cameras have a program called “wildlife photography”, or sometimes “nature photography”. This program usually works efficaciously and without aberrations. Nature, for its part, also runs some programs, albeit of a radically different, well, nature. Within one of these programs, called “primates”, one option is called “David Slater” and the other “macaque”. These two options are equally improbable and they, in turn, are both programs with infinite probable and improbable outcomes. In “macaque”, the “nature photography” option is not particularly useful and the option “human photographing nature” is no more appealing than is any other, certainly no more than “monkey photographing nature” or “monkey photographing monkey”. Hence, in short, the copyright to monkey selfies does not belong to any person or monkey. It belongs, if at all, to nature – the only autonomous program.²

In fact, defining nature as program makes it clear that any image we humans are able to consciously produce, whatever it is, is an informational state that emerges from entropy. Indeed, every human attempt at self-characterization through mechanisms that produce imagery out of disarray proves that any apparently coherent order is incidental. Therefore, not only is a manmade portrait photograph just as improbable as a monkey’s selfie, but any image created by humans since the Lascaux cave paintings – and in fact, any “information” preserved by humankind – is a negentropic result. As one monkey on Sulawesi has demonstrated, images are always an attempt to sabotage nature’s program, an experiment that, if successful, can only be temporary. In other words, art, ostensibly one of the traditional features of human uniqueness, is not perceptive commentary but disengagement. Every artist is a renegade monkey.

At the same time, even disengagement and other improbable situations are embodied in the program to begin with. They may appear not accidentally but deliberately, an action that Flusser describes as “to produce improbable, informative situations to consolidate invisible possibilities into visible improbabilities” (Flusser, 2011b: 18). The likelihood of their appearance increases the longer the program runs, and anyone who is familiar with it can predict the advent of improbable situations others among us would consider both probable and improbable (e.g. a monkey, a red heifer, or a parrot reciting the Fourth Geneva Convention). Any preserved information, such as an image, can be created using an apparatus according to the rules laid down by its program. However, the same image may be completely improbable from the perspective of another apparatus running a different program or from the meta-

² Perhaps, following ideas about “biological commons” and “genetic commons”, we could also define a “programmatic commons” (Thacker, 2008).

program's perspective. In other words, a human selfie is also an improbability from a monkey's point of view.

Even if it is a venerable human trait, creative agency has never been evenly distributed amongst human beings. Most people's acts simply reflect probabilities that play out obscurely and subconsciously. What's more, the proliferation of uninformative images underlines the danger inherent in any definition of creative agency as an exclusively human ability. Allowing for a generous definition of creative agency, one that stems from functional states (comparable as they are to intentional ones), or simply from probabilities, raises the suspicion that human made artifacts do not possess any virtue that is absent from artifacts generated by animals (or, for that matter, other non-sentient beings).

The monkey selfie images demonstrate that every natural event can generate instances of the halting problem.³ Sometimes an apparatus created by human beings will continue to operate after the result for which it had been set up has already been achieved, in which case its continued operation may produce unwanted results. In fact, very deliberate act of image creation is comparable to genetic engineering, or further removed, an experiment in artificial life. Can a primate creator of images ever know when to stop? The answer to the question depends on the identity of the creator: a programmer will indicate the desired result, an experimental photographer will ignore it, a monkey may stop on the indicated mark, and a human will recognize the halting point as only temporary. The history of human photography, much like the population of the London zoo, is a demonstration of the difference between improbability and impossibility.

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³ The halting problem is a decision problem about properties of computer programs on a fixed Turing-complete model of computation. The problem is to determine, given a program and an input to the program, whether the program would eventually halt when run with that input.

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A Post-Human Feeling of Death: It is 2020, and I am Breathing Dead Bodies

ABSTRACT

It is 2020, and I am sitting in the Utrecht University Library thinking about how could I have felt (or still feels) to experience Teresa Margolles' *Vaporización* (2001-2002). This installation consisted of a room filled with vaporised water used to clean corpses from a Mexican morgue. Before turning it into vapour, this water was disinfected, being no risk to human health. However, and despite the physical and temporal distance, this experience makes me reconsider my own body's fragility. I feel the vaporised corpses still remain in the air I am breathing, making me feel closer to death than I really am. This paper will analyse my experience of *Vaporización* through Rosi Braidotti's (2013) theory on posthuman necropolitics. Namely, this installation's corporeal and communal ways of experiencing will be informed by Braidotti's argument that posthuman necropolitics can connect us trans-individually. This analysis will allow me to suggest that *Vaporización*, on the one hand, breaks open the limits of our live human bodies and the dead "human" bodies. On the other hand, I suggest that *Vaporización's* materialisation of death shows that posthuman necropolitics should also comprise our affective relationship with death. It is 2020, and death has always been in my lungs, on my skin and clothes.

KEYWORDS Posthumanisms, necropolitics, posthuman necropolitics, trans-corporeality, installation art.

*I know, I imagine that this unanalysable feeling changed
what there remained for him of existence. As if the death outside of him could
only henceforth collide with the death in him.
"I am alive. No, you are dead."
Maurice Blanchot*

I.I

It is 2020, and I am sitting in the Utrecht University Library thinking about what it could have felt (or how it still feels) to go into and through a room filled with vaporised water used to clean corpses from a Mexican morgue in 2001. This experience¹ is produced by Teresa Margolles' installation *Vaporización* (2001-2002) - a word that means to create or turn something (usually liquid) into vapour. *Experiencing* this piece 'virtually' (as I can only access two pictures and my assumptions of how my body would have felt) makes me reconsider my relationship with death, its materiality and affects.

The simple idea of being in that room confronts me with potential unease. I am aware the water was disinfected², and technically there is no difference between the water used to wash my clothes or my baby nephew. However, this experience challenges me emotionally and bodily, allowing me to deeply reconsider the relationship between corpses and my own body.

Margolles' piece enables me to comprehend death from a perspective of embodied understanding. This allows me to elaborate an analysis drawn from my embodied experience and bringing new light to my own relationship with death. For this, Rosi Braidotti's Braidotti's theory of posthuman necro-politics will function as the theoretical framework to bodily address and position this installation. This exercise will provide the theoretical tools to critically address my own experience while briefly expanding Braidotti's framework. In other words, the way *Vaporización* allows me to feel death will not only be explained by Braidotti's framework, but it will also build on it. Specifically, my experience will contribute to how Braidotti affectively "locates" death and the dead body regarding the living body.

I.II

Foucault defines bio-power as power-centred techniques in the discipline and formation of human bodies, including their spatial distribution, organisation, and possibilities to enact and react to and with those spaces and dynamics.

¹ Different from reading and analyzing, I am proposing an affective and virtual positioning of my own body within the installation although I have never and probably will never see and feel it. Reading and interpreting have too much of a semantic and "language-like" taint and I would like to approach this installation not as a text but as an experience with which I can bodily think with and through. Not as a text to interpret and give value, but an experience that triggers and produces embodied thoughts and emotions.

² Coulson, Amanda (2004, September 4). Teresa Margolles. *Frieze* 85. <http://artofthemooc.org/wiki/teresa-margolles-depicting-the-relationship-between-living-and-dead/>

It is the power to ‘make’ life and ‘let’ die (Foucault, 2003: 242). In this string of thought, Achille Mbembe builds on bio-power to coin and define necro-politics as the sovereign power of the administration of death. It is “the generalised instrumentalisation of human existence and the material destruction of human bodies and its population” (Mbembe, 2003: 19). Nevertheless, in the emergence of post-humanist thinking, the framing of the politics of death within ‘human’ bodies and their ‘existence’ seems limiting. For this reason, Braidotti suggests expanding these theories and politics onto a planetary and non-human (pan-human) relational, inter-species ecologies with shared bonds of vulnerability—this way, connecting human and other-than-humans’ fates (Braidotti, 2013: 111).

Within the posthuman framework, distinctions between ‘letting’ and ‘making’, ‘dead’ and ‘alive’ are fuzzy and co-constitutive, not as opposed (or defined by its opposition) but as entangled and relational. Braidotti positions life and death as impersonal by saying, “just as the life in me is not mine or even individual in the narrow, appropriative sense espoused by liberal individualism, so the death in me is not mine” (Braidotti, 2013: 135). In this sense, what does it mean to ‘be’ and ‘become’ dead under this posthuman framework? Braidotti proposes to take a closer look into the concepts and practices of death (ways of killing, forms of extinction, creation of mourning rituals and the necessity of bereavement) as a way to construct an affirmative posthuman theory of death and to rethink death and mortality in a contemporary bio-mediated context (Braidotti, 2013: 110).

In this spirit, this paper will look into Braidotti’s ideas on posthuman necro-political beings and becomings. By locating Teresa Margolles’ installation within this framework, I will favour posthuman necro-politics while also rethinking its boundaries. To *experience* Margolles’ installation through Braidotti’s framework will allow me to position the installation as affective-material evidence for the validity of these posthuman necro-politics. Furthermore, it will enable me to suggest that necro-politics are not only about the processes of making life and letting die but about our affective relationship with the dead body. Positioning Margolles’ posthuman materialisation of the dead body (vaporised corpses) will allow me to suggest an approach to necro-politics that comprises how we feel about the dead body and its location³.

II.1

It is 2020, and I am *experiencing Vaporización*. I am thinking about what does it mean to still feel the vapour on my skin. Is it still actually here? Braidotti’s ideas help me raise some suggestions around this question. For her, through

3 To raise questions about the ‘location’ of the dead body within necro-politics resonates with some questions Mbembe makes in his essay *Necropolitics*. He states that: “What place is given to life, death, and the human body (in particular the wounded or slain body)? How are they inscribed in the other of power?” (Mbembe, 2003: 12)

posthuman necro-politics, we can frame death as an ever-present condition in our psychic and somatic landscape. Death is understood as an event that already happened but yet to come. It is a 'not-yet' that actualises in the present and defines our human processes of becoming subjects (Braidotti, 2013: 131-2). Death is always ahead of us and marks a threshold for our powers and possibilities. In this sense, posthuman necropolitics frames death as a temporal paradox, as something that inevitably already happened and is yet still to come. The past, the present and the future are mixed in an event, a condition and a body that already happened (Braidotti, 2013: 137).

Through this framework, death is trans-temporal; it lines ahead but is already here. It is an inevitable condition of possibility that remains like a pulsation (Braidotti, 2013: 132). Death will be; thus, it is. But for Braidotti, death's trans-temporality scripts our possibilities not as a barrier but as a condition of being within the life-death continuum. With this, she breaks open our temporal separation with death's materiality, bringing it to the present as body pulsation.

This approach allows me to contextualise my own body and my own death within *Vaporización's* vapour. Thus, how does death's trans-temporality as a material body and as a possibility of my own body resonates with Margolle's piece? Are corpses in me now?

It is 2020, and I am (still) experiencing *Vaporización*. Teresa Margolles presents me with a dead body that makes my own death apparent. It is a dead body that, echoing Braidotti, is pulsating in me as it is in the air touching my skin. When Margolles transformed that water into vapour and into the air, she broke the temporal limits between 2001 and 2020. We are nineteen years and an ocean apart, yet I feel that, maybe, the air I am breathing is of corpses. The air's mediation blurs the temporal limits of 'what was' and 'what will.' I am breathing, hence becoming with the air that potentially is made out of dead bodies. And that potentiality actualises in my present body and experience.

Vaporización makes Braidotti's theories apparent. It shows that death and dead bodies are material and virtual possibilities that shape our bodies. This installation makes me feel my body as part of a loop between life and death. A continuum that is guided by the intermingling of past, present and future. On the one hand, the vapour is present since 2001 and will be present in the air I am breathing. On the other, this incorporation of vapourised corpses makes me feel that death is in me as a part of my body, as an inevitable possibility.

It is 2020, and I feel I am breathing the same air, the same water that Margolles vaporised in 2001. These corpses are in here and in there. They are in me as much as they are in you. If not, when does this vapour stopped being 'touched' by death? Where is that vapour now? Can it be contained by walls? By time? It is 2020, and my death already happened as reality and possibly, shaping 'our' temporalities and, therefore, my becoming subject.

II.II

It is 2020, and vaporised corpses are still going through my lungs and touching my skin. Like air, the human (or non-human) body is reproduced and expanded. Like air, it becomes (and it shows) a new and specific mode of production and interaction. The materialised and re-materialised (or trans-materialised) dead body by Margolles cannot be located within the limits of the individual or personal body. It is vapourised; it transforms into the air. And as such, it exists and becomes with all of the bodies that breathed and touched it. Those vaporised bodies are more than themselves, are more than their previous individual self. These bodies (including my body, your body and corpses) are trans-materially vapour. Not as a prosthesis but as part of us. Margolles is not producing a new form or possibilities of the dead human body. She is making us think and feel it and its relations differently.

This brief analysis of *Vaporización* echoes Braidotti's suggestions that the dead body is impersonal. Through the readings of Maurice Blanchot's texts, Braidotti says that the posthuman perspective towards life and death cannot be constrained to individual and personal processes of becoming. Death exists as a condition and a possibility with no unique frame; it transcends the limits of matter as much as time. It is something distant from our own 'human' selves but defines and structures our becomings. It is mine and not mine simultaneously.

This approach can be further explained with the works of other posthuman feminists theorists. According to Stacy Alaimo, the posthuman body has a trans-corporeal material. She explains that this trans-corporeality is where and when human materialities open up and become inseparable from their environment. Therefore, the walls delimiting the human corporeality extend to other human and non-human bodies (Alaimo, 2008: 256). In this vein, Moira Gatens frames the human body as radically open to its surroundings. Hence it is composed and recomposed by other bodies (Gatens, 1996: 255). Positioning Braidotti's argument within this theoretical framework allows me to see her approach towards impersonal death as trans-material or trans-corporal. This means that her argument of impersonal death blurs the binaries between life and death, human and non-human. These oppositions are not seen as enclosed but as part of a continuum.

Braidotti applies these ideas to think of the necro-politics of the dead posthuman bodies. For her, this framework offers the possibility to expand the life-death continuum towards the human-nonhuman. However, in this case, the non-human does not only subjects to non-human life forms but also non-human death forms. In other words, our processes of being alive and creating death are not restricted to our human and individual materiality. This condition involves making friends with non-human deaths (Braidotti, 2013: 137), making apparent our impersonal ways of becoming with death. It allows seeing our own processes and potential of death connected with every subject/object regardless of its category and positioning.

Vaporización makes these claims evident. It unveils that other humans and non-humans are materially part of my processes of becoming alive and possibilities of becoming dead. And in this case, the limits between the human and the non-human becomes opaque. This life and death in me are no longer mine or even individual. *Vaporización* shows that materially, those corpses are no longer contained within their own physical and human limits. They are expanded on the air and transformed in it. As transformed into vapour, the human body is dispersed outside its human and bodily limits. As we breathe them, as they touch our skin, they become part of us, and we become the same death as them.

Furthermore, this also happens the other way around. As the body becomes air (the human becomes non-human), the air becomes body (the non-human becomes human). In *Vaporización*, I can see the “humanisation” of the technically “non-human.” How much of “humanness” is in and becomes with the air? The dissolution of the human body into the vapour also makes apparent that our humanness has merged with non-human forces. Hence, it is not only the de-humanising of our body, but it is the humanising of the air that we will become and that we already became. This installation not only presents with this information but makes us (or makes me) feel it. It makes me experience that my own limits are blurred and that I become with entities and conditions that fluctuate between the human and the non-human, the alive and the dead, the present and the past.

The corpses are air as much as air is the corpses. There is much life as there is death in what we are breathing, touching our skin, and making our clothes damp. Technically there is no difference between that water and the water used to wash my clothes or my baby nephew. However, the materiality of this vapour is trans-material; there is some degree of humanity in it. Hence, breathing it affects me. The air I am breathing becomes me. The death I am breathing becomes me and defines me. This installation makes me feel and experience, although I did not actually experience it. Although we are nineteen years, an ocean apart, I can still feel it in me because it is trans-material.

II.III

It is 2020, and the vapour is (and will always be) part of my body and a part of your body. I feel this vapour still being a part of me. These feelings that emerge from my *experience* of *Vaporización* complements a particular aspect of Braidotti’s theories: how we experience the trans-corporeal element of the posthuman body.

According to Braidotti, the dead body’s trans-material qualities are manifested in their dispersion and proliferation in media. For her, death is dispersed in a virus-like and computer-based transit. This is mainly allowed by technological forces that move the corpse outside itself as a spectral

reminder present in daily global media, news, objects of entertainment and other media products (Braidotti, 2013: 113-4). This argument is elaborated in response to Foucault's ideas around bio-politics and the displacement of the dead body in western societies. For Braidotti, Foucault argues that the systemic disqualification of death and the dead body has been happening since the late eighteenth century. In other words, one of the three concrete manifestations of bio-power is the systemic estrangement of death as a process and as an object/body. Foucault states that "the great public ritualisation of death gradually began to disappear, or at least to fade away, [it is] something to be hidden away. It has become the most private and shameful thing of all" (Foucault, 2003: 247). Therefore, for Braidotti, the "technologically or media-driven" trans-material embodiment of death brings new light to Foucault's discussion. For her, death and the dead body are no longer stranged, but they inhabit our everydayness in the media we consume.

However, Braidotti is aware that these media products do not fully incorporate death in our becoming. For her, the *paradox of the inhuman* explains why an unwillingness to fully recognise the possibility of dying still exists. Following the ideas of Lyotard, she explains that there is something in the human that simply resists belonging to common humanity, placing itself as ontologically inhuman (Braidotti, 2013: 135). Therefore, there is a desire to self-fashion and self-style our deaths to negate the unavoidable: the becoming non-human and becoming death.

Perhaps this is why despite the network of images I am bombarded with, my experience of *Vaporización* confronts me with death in a highly different manner. Even though Braidotti argues that these media products function as corpses-to-come and are ever-present, there is a part of me that still negates a part of me. I think my experience of Margolles's installation shows that there is still a long, or even unachievable, way to go to fully recognise myself as a corpse-to-be. Therefore, I believe that Foucault's argument of our alienation from death is very much still present. Regardless of the abundance of mediated products, my daily relationship with death is not as corporealised as in *Vaporización*. This installation does not present me with death images, but I feel and embody its presence. It is in me, in the air that fills up my lungs and damps my skin.

I believe Margolle's installation does not necessarily offer a solution, but it makes this situation apparent. It enabled me to feel death is part of the air I am breathing, which allows me to re-evaluate my affective-material relationship with death. It stretches the boundaries of the representation and the limits of the embodiment of death.

III

As briefly elaborated in the previous pages, positioning Margolles' work within Braidotti's posthuman necro-politics addressed how I understand and perform

death and how I feel it. Hence, Margolles' installation problematises how I experienced death - where I "locate" it and how I feel it in me and as part of me. It makes me aware of the multi-dimensional plurality I become with, about the numerous possibilities of connection that involve me with different, and in many cases undesirable, parties.

Unlike Braidotti's ideas on the "location" of death – as spectral reminders of the possibility of death-to-come – *Vaporización* does not create a spectre (a ghost or an image) but an embodiment of more-than-human bodies. I see a different proposition of engagement in this installation. It "locates" the dead body within my body, creating an engagement that deals with embodied affective-materiality. I do not see corpses on the television. I incorporate them trans-materially and trans-temporally. This installation suggests a way of relating with death that is clearly corporeal. I feel death in me. Those vapourised corpses are part of the air I am breathing, are part of me, hence affecting me bodily. This *experience* makes me uncomfortable as it confronts me with a piece of me I do not want to experience.

Furthermore, this installation suggests a way of collective relationality with the non-human. It opens my body towards the world. In and through my experience, the corpse, the non-human, the 'other' are no longer separable from my own being and becoming. It spills on and into me. It is now in my lungs, on my skin and clothes. It is an experience that articulates the plurality of each body's experience (humans and non-humans) with my own inevitable death. Also, it makes me aware of the inescapability of the non-humanness of my humanity and the inevitable death that is in and becomes with me (in us). The action that already happened and still is to come, reaffirming my collective and individual condition as both human and non-human.

It is 2020, and I am already dead. It is 2020, and posthuman necro-politics allowed me to understand my body(ies) as trans-temporal (a possibility that has already happened still yet to come), as trans-corporeal (the possibility of being and becoming in and with other human and non-human bodies) and trans-material (a possibility of becoming non-human). It is 2020, and Margolles' proposition of engagement produces the feeling of being uncomfortable with a part of my own humanity. A feeling that is not a ghost or an image. A feeling that comes from the past and remains in the present, in my body, on my skin.

IV

It is 2020, and we are all breathing my death, my dead body. It is 2020, and our bodies are not only human anymore. It is 2020, and we are potentially and actually an inevitable possibility. It is 2020, and Teresa Margolles does not deny the reality of death but proposes a different way to deal with it by relocating it inside ourselves. It is 2020. My corpse is an in-between object and an organism connected to a variety of sources and forces.

Braidotti's posthuman necro-politics allowed me to experience *Vaporización* from a critical embodiment. It allowed me to feel it as an open body, connected with other human and non-human forces of living and dying. Not only driven by disgust and fear. However, experiencing *Vaporización* allowed me to understand that still, I do not embrace my own humanity as a potential non-human, as a potential corpse. There is a part of me that I still alienate, which perhaps I have to start recognising as part of myself. Not as uncanny, but as ecosystemic. In this sense, the importance of *Vaporización* lies in the way it "locates" death. It positions the corpse not only as an event that already took place or as an inevitability. It is a condition of my being, of my embodied and affective being. It is 2020, and I am already a corpse, and I feel it in my skin since 2001.

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Forensic Love and Visceral Data: Bio-Antidote for Romantic Love

ABSTRACT

Forensic Love and Visceral Data is an art project that proposes the urgent creation of a bio-antidote, a biomaterial, performative-ritualistic-scientific-medical, to cure (us) of romantic love and eradicate this chronic pandemic. A disease, a linguistic virus, the malware that constitutes one of the basic pillars of patriarchy, diluted in songs, sayings, and compliments. The raw material of the bio-antidote(s) will be our visceral data, which is obtained from the contrast and verification of romantic love sayings with some medical analysis techniques hacked into their significance and interaction (dose/spell indication) with the participant-patient. The bio-antidote is created from the data and matter of the “sick” organ that is the one that has received and assimilated the curse of romantic love. This publication reflects the stage of the project to date and this declaration of war that is at the same time a statement.

KEYWORDS Body Politics, Biotechnology DIY-DIT-DIWO, Bio-Antidote, Post-Gender technologies, Decolonizing Technologies.

*"A labyrinth of blue cells and acids.
A tower of words that never reaches heaven."
(EIELSON, 1964/2015)*

Forensic Love and Visceral Data was born with an air of predestination a couple of weeks before the COVID-19 pandemic started. Thus, we met our first virus of the year, without even imagining what would come immediately afterwards. This is how our projects are, they are born from our personal crusades and therefore they are made of the matter of cyclones, dreams, life. They are micropolitical flesh (Image1).

We, Cecilia Vilca & Lorena Lo Peña, join forces to work at the intersection of performance, technology, and science. We research transversally in Gender technologies, Body politics, Aesthetic Colonization and Microphysics of power. This involves us as artists but also as social individuals that do not escape their environment. Our methodology has two aspects: the artistic practice and its reflection, which is completed with the retro feed of the audience/participant without which it would have no meaning.

We work together transdisciplinary, Lorena from Performance Art and Cecilia from Media Art, in a true co-creation on the border of disciplines where each one nurtures and participates in the practice of the other. Our backgrounds lead us to create our first project *ENCAJA/INSERT: S vs. L* interactive digital performance. It was conceived as a traveling piece for different audiences. In these successive trips this project allowed us a reflection that is materialized in conferences, publications, and seminars.

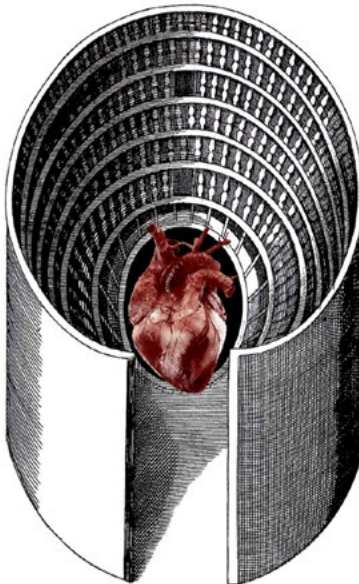


Image 1. Emblem image of the project. Animated GIF made with internet royalty-free historical medical images.
©Lorena Peña & Cecilia Vilca.

HYPOTHESIS

We start from the hypothesis that romantic love is a disease. It is the beginning of all violence that is inflicted on our body-body. Diluted in songs, sayings and compliments is “gently” inoculated in us. A linguistic virus, the malware that constitutes one of the basic pillars of patriarchy, as a social technology.

FUNDAMENTALS

That is why in this art project, we propose the urgent creation of a biomaterial, performative-ritualistic-scientific-medical, an antidote to cure (us) of romantic love and stop, eradicate this chronic pandemic. The raw material of the bio-antidote (s) will be our visceral data, which is obtained from the contrast and verification of these romantic love sayings with some medical analysis techniques (imaging tests, biochemical analysis, pathological studies, chromatography research, neurological exams, etc.) hacked into their significance and interaction (dose/spell indication) with the participant-patient (Image 2). Therefore, in this project, biomaterial meaning comes from bio fabrication but especially from medicine: a material that the organism can tolerate and that is often made up of parts of the recipient human body itself. In this case ours (Image 3).

PROPOSAL

Since romantic love is a virus, medical protocols will be followed to identify and treat the disease: Diagnosis, Creation of antidote and finally Dosing, dividing the project into three stages. Our preliminary diagnosis is that the language being a virus enters the body from an initial point to expand and affect the different organs (Image 4).

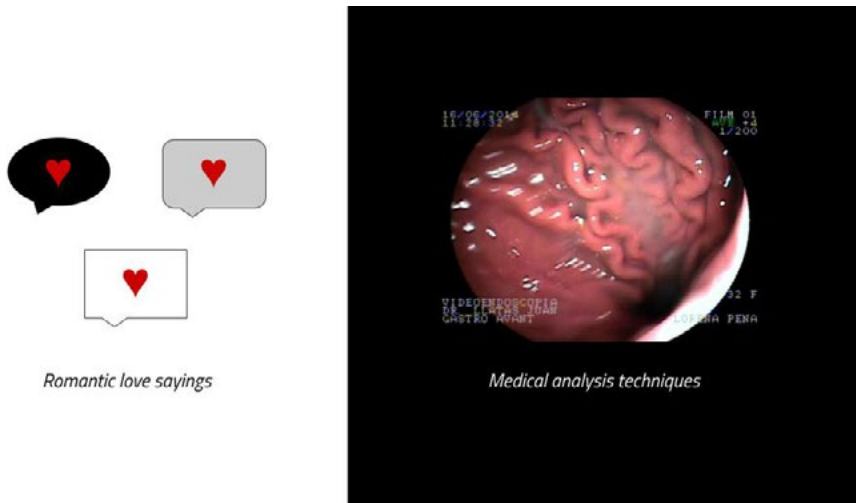


Image 2. Contrast and verification of romantic love sayings with medical analysis techniques. Image of medical history of Lorena Peña.

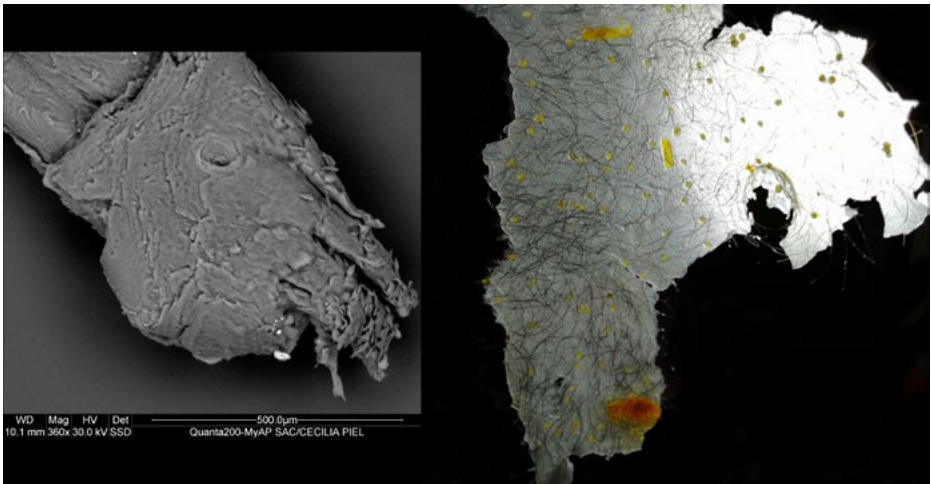


Image 3. DIWO remote home-made explorations with our visceral data: Lorena (hairs) biomaterial ©Lorena Peña. Cecilia (skin) photomicrographs ©Gladys Ocharan–MyAP.

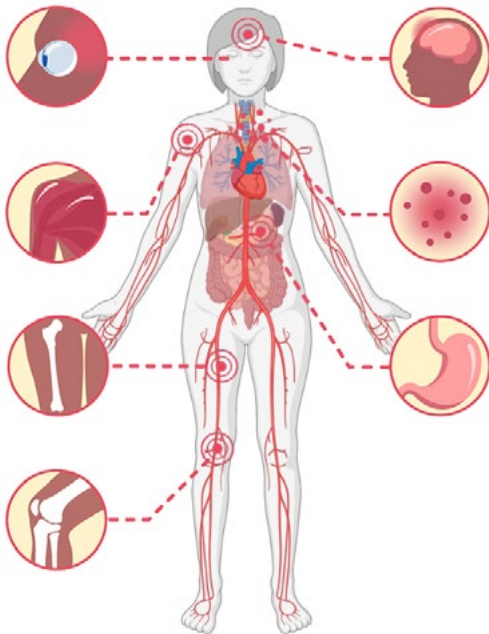


Image 4. Scientific illustration made with Biorender application templates. ©Cecilia Vilca

On the other hand, the power granted to these phrases makes them sentences, often of death. Each saying acts on a specific organ, curses it. The bio-antidote is created from data and matter of the “sick” organ that is the one that has received and assimilated the curse of romantic love (Image 5).

The project begins by analyzing these popular sayings, the internal programming of romantic love and its physical effect on our emotional body. Phrases that not only refer to an “interior” and organs, but also use mostly physical terms (death, killing) and even medical (breathing, palpitations). These are the symptoms of the disease called “love”, but they are not just ours, they are the choral symptoms of our sick society (Image 6). As in every diagnostic start what we do is listening.

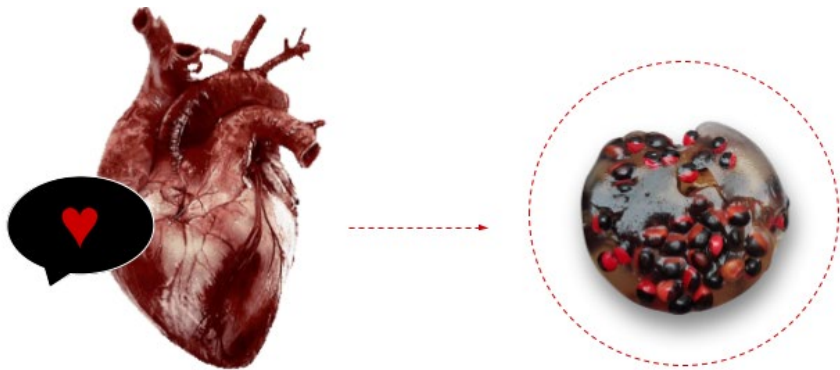


Image 5. Collage. ©Cecilia Vilca. Internet Royalty-free images and our biomaterial explorations.



Image 6. Collage. ©Cecilia Vilca. Internet royalty-free medical images.

SEQUENCE OF PROPAGATION

This group of “symptoms” (sayings) will establish the possible sequence of spread and severity levels of the disease, as well as the possible medical techniques to collect and analyze the visceral data to create the bio-antidote and its dosage in specific spells to combat each “saying-curse”. Some of these techniques will be less invasive (imaging tests and analysis) than others (tissue and cell extraction) and will mix scientific-medical and ritualistic protocols. Making fiction with Western medicine, creating a body performance narrative.

Contagion/Inoculation

Phrase: *“Love enters through the eyes.”*

Medical techniques proposed: Optical Coherence Tomography-OCT, Schirmer Test, Corneal Topography (Image 7).

First symptoms

Phrase: *“I feel butterflies in my stomach.”*

Medical techniques proposed: Abdominal Ultrasound, Gastrointestinal Endoscopy, Coproculture (Image 8).

Initial stage

Phrase: *“You accelerate my pulse and take my breath away.”*

Medical techniques proposed: Pulse Wave Analysis-PWA and Echocardiogram.

Febrile stage

Phrase: *“There is chemistry between us.”*

Medical techniques proposed: SMAC Study 24, Saliva Test, Mineral Hair Analysis-HTMA, Skin tests by puncture or scraping.

Phrase: *“We are made for each other.”*

Medical techniques proposed: Histocompatibility Antigen Test, DNA test, Biopsy (Image 9).

Critical / Peak Stage

Phrase: *“You broke my heart.”*

Medical techniques proposed: Complete Blood Count, Cardiac Computed Tomography Scan (Image 10).

Possibility of recurrence

Phrase: *“I don’t know if I will be able to forget your scent.”*

Medical techniques proposed: Liquid Chromatography-HPLC, Brain Ultrasound, Electroencephalography (Image 11).

Final stage

Phrase: *“I can’t live without you.”*

Medical techniques proposed: Respiratory Rate Analysis, Heart Rate Measurement, Magnetic Resonance Imaging-MRI.

We propose these medical techniques as a starting point. These are those that could combat each phrase-course selected. From this set of tools, some will be chosen and some discarded along the development of the project.

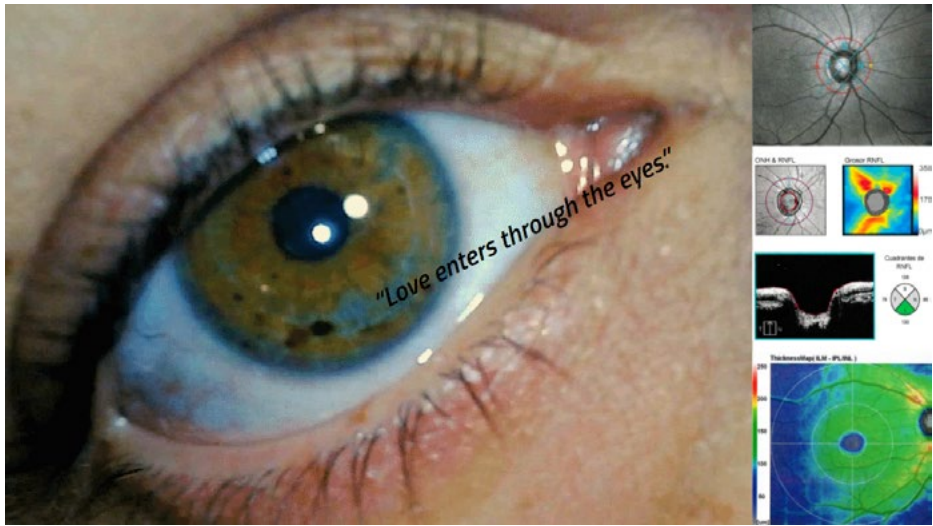


Image 7. Collage. ©Lorena Peña & Cecilia Vilca. Animated GIF of self-explorations with endoscopic wireless camera ©Lorena Peña, medical history of Cecilia and internet royalty-free medical images.

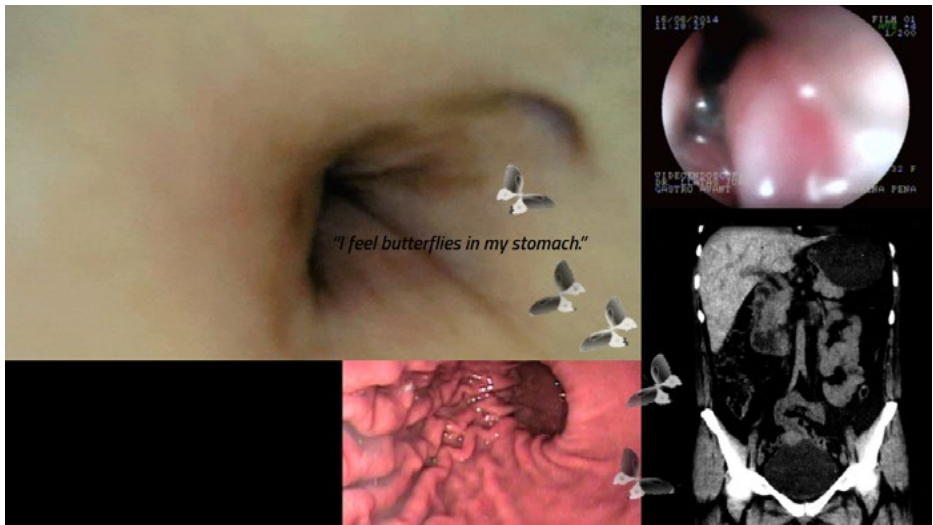


Image 8. Collage. ©Lorena Peña & Cecilia Vilca. Animated GIF of self-explorations endoscopic wireless camera ©Lorena Peña, our medical histories, and internet royalty-free images.

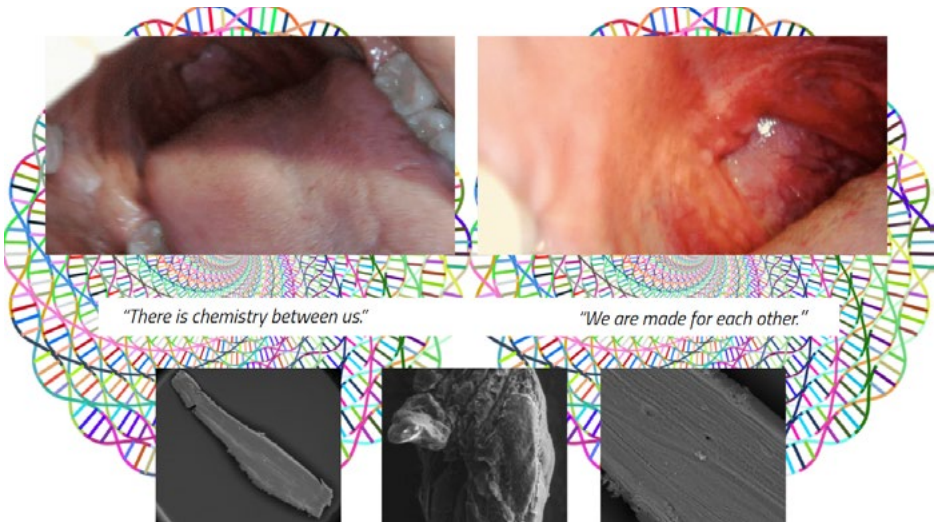


Image 9. Collage. ©Lorena Peña & Cecilia Vilca. Animated GIF of self-explorations endoscopic wireless camera ©Lorena Peña, SEM photomicrographs ©Gladys Ocharan, MyAP, and internet royalty-free medical images.

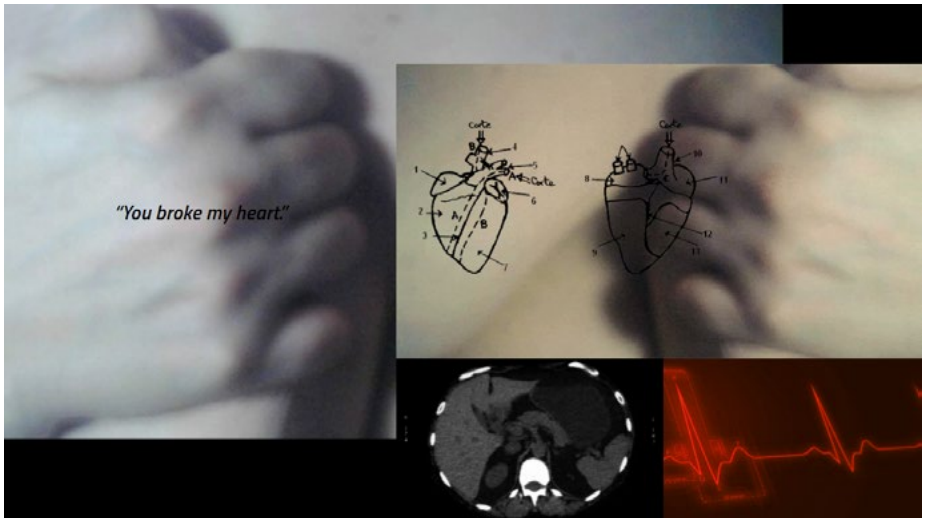


Image 10. Collage. ©Lorena Peña & Cecilia Vilca. Animated GIF of self-explorations with endoscopic wireless camera, our medical histories and internet royalty-free medical images

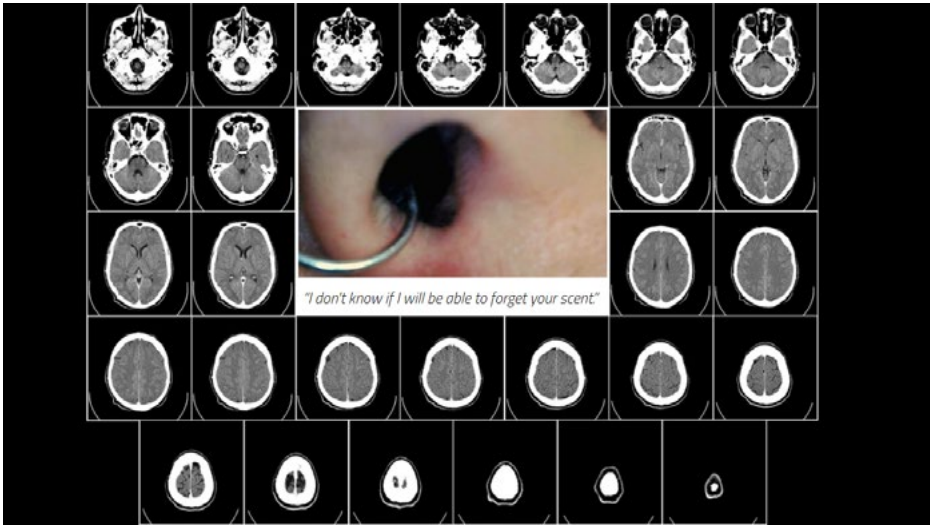


Image 11. Collage. ©Lorena Peña & Cecilia Vilca. Animated GIF from self-explorations with endoscopic wireless camera and internet royalty-free medical images.

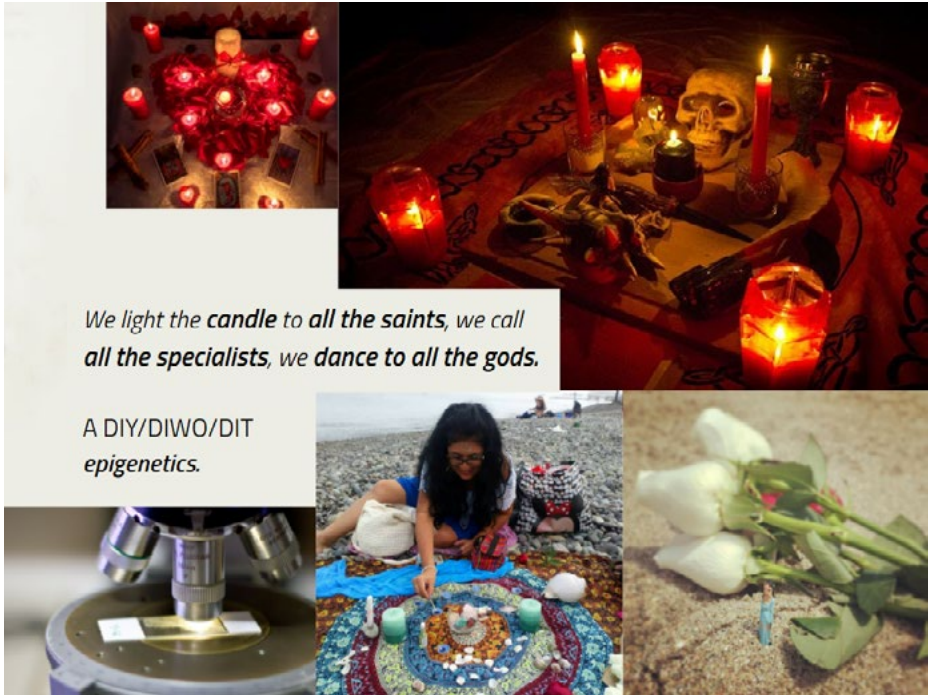
DECLARATION OF WAR

Then, analyzing our social fabric (Image 12), we respond, returning to it, not only the possibility of a cure with a bio-antidote but also its dosage as indications-spells, created from the same sayings that will be re-evaluated through social networks.



Image 12. Collective “Las Tesis” (2019) interpreting “A rapist on your way”.
©Javier Torres / Agence France-Presse - Getty Images.

This performatic dimension of the project allows us to hack our body-minds and at the same time decolonize the western medical tradition. Because what assumptions are behind these traditional myths about love? What medical-historical references endorse these sayings-curses?



*We light the **candle** to **all the saints**, we call **all the specialists**, we **dance to all the gods**.*

A DIY/DIWO/DIT
epigenetics.

Image 13. Collage. ©Lorena Peña & Cecilia Vilca. Iemanjá ritual (Lima, 2017, Callao, 2019. Both Peru), optical microscope from MyAP Lab ©Jessica Alva and internet royalty-free images.

We contaminate each other the methodologies of science and belief to give a ritualistic dimension to a heteronormative white western medical apparatus. We light the candle to all the saints, we call all the specialists, we dance to all the gods (Image 13). A DIY/DIWO/DIT epigenetics.

We are the modest inoculated witnesses of Donna Haraway and at the same time we enchant everything as Paul Preciado reflects. We the zero patients, Lorena and Cecilia, offer our visceral data in-love: blood, feces, sweat, tears. What will be the selected components? We do not know but as a starting point we have a corpse, a metaphorical body full of other deaths and hopes. Ready to be read. *A forensic love* (Image 14).

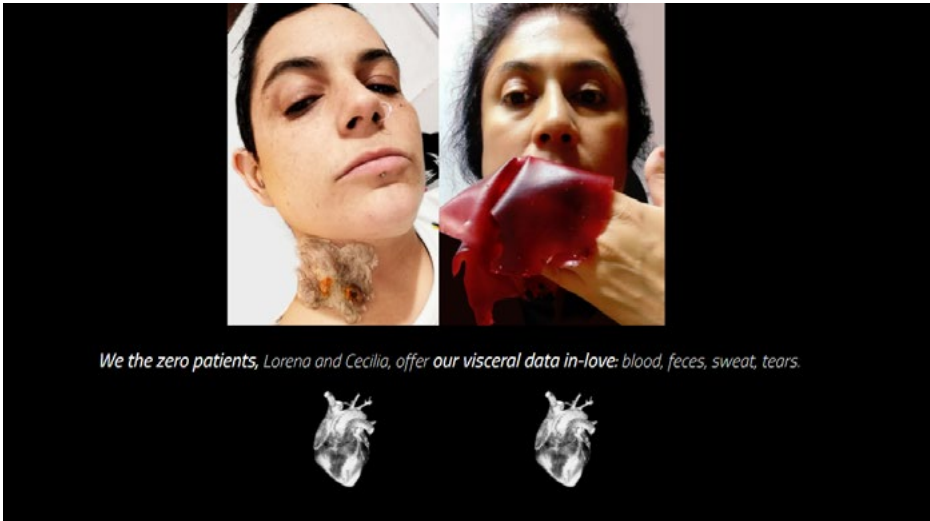


Image 14. Collage. ©Lorena Peña & Cecilia Vilca. Hearts Animated GIF from internet royalty-free medical images and our biomaterial explorations.

EPILOGUE: THE LIFE OF THE PROJECT

Forensic Love and Visceral Data is the second project that we do together and like in the first one *Encaja / Insert: S vs L.*, it is the union of our struggles, but it is also the reaffirmation of the commitment to a way of working that implies getting involved from the skin, heart, and wounds to heal together. Processes that from individuality become collective in a transversal and rhizomatic way. This includes first our close environment, family-allies, with whom we have been building projects and networks that expand into our society. Lorena from the Cultural Association *elgalpon.espacio* of performance and Cecilia from MyAP electron microscopy laboratory.

When the COVID-19 health emergency was declared in our country, we found ourselves in a paradoxically contradictory situation, on the one hand we found ourselves unable to access medical facilities: laboratories and hospitals, necessary to develop our project. On the other hand, suddenly, we were immersed in precisely what we had decided to research and combat: the scenario of a pandemic with a lethal virus, this time completely unknown. Between the bewilderment, the surprise and later the pain, we ask ourselves, and we keep asking, what were the chances in a lifetime that this would happen?

We decided then, in an act of radical acceptance, to immerse ourselves in this kind of “crash course with first-hand learning”, which involved a ruthless cathedra of necropolitics of (what we considered) humanity. To that we add, the few surprise gifts that all this sadness brought with it, suddenly we were all connected in a virtual intermediate space. This ubiquity allowed us not only to continue working together remotely, but also to create-learn in areas of

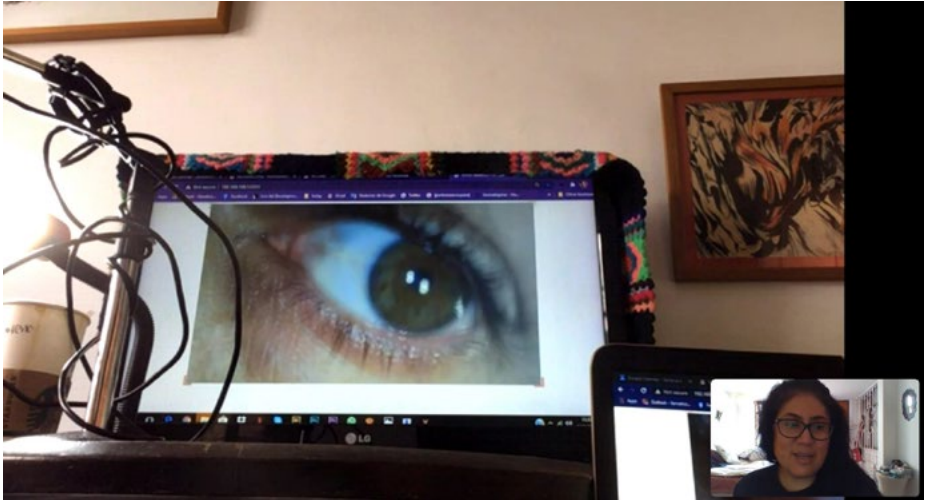


Image 16. Lorena performed DIWO home-made explorations ultrasounds on herself with a portable endoscopic camera remotely connected with Cecilia ©Lorena Peña & Cecilia Vilca.



Image 17. Omolu / Obaluaê, a Brazilian orixá (deity).
Internet royalty-free images.

That is why we do not give up exploring the use of medical and scientific tools. We had to adapt, and for this, we include equipment and networks that we already have. We have MyAP laboratory, to which Cecilia had access to

perform electron microscopy analysis. Lorena, in turn, performed remote DIWO ultrasounds on herself with a portable endoscopic camera (Image 16) and with this material she made the animated GIFs that illustrated our conference. This was another finding that perhaps echoes all the gifs shared by the social networks in this period, it is a “guerrilla” technique, between anachronistic and funny, which we thought was irreverently challenging the neat imaginary of medical-scientific visualization.

Another fundamental decision was to use material from our own medical histories, which are part of that corpse ready to be read, which were without a doubt, our own bodies speaking from another time to our today’s bodies. These analyzes, ultrasounds, tomographies, x-rays were like those evidence of unsolved crimes (or loves) remaining saved, stored accumulating dust, and that as the years go by, their time comes, and they are analyzed again, under new technologies, looks and learnings.

Last but not least, the ritualistic aspects that are the core part of the project were invoked, beyond it. We need our beliefs in order to process and survive the times we are going through. Perhaps for this reason, in this period we also met Omolu / Obaluaê, a Brazilian orixá (deity) (Image 17), who showed us that there is another paradigm different from the western one to approach the disease, precisely that of understanding it as a message. We hope, now and in the future, to receive and understand everything that is being said to us.

Forensic Love and Visceral Data, our project that we have nicknamed “predestined”, has been shortlisted in the framework of Hangar Residency, Biofriction Open Call 2020. The war against the virus of romantic love has been declared in conference format at TTT 2020 Taboo-Transgression-Transcendence in Art & Science” (2020, November 26-28), University of Applied Arts Vienna/Online.

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Death & Virtuality: How to Make it to the Afterlife in the Virtual World?

ABSTRACT

The virtual world takes a large place in our every day life and our society. The digitalized life has a major impact on our life “irl” (“in real life”). The way a civilization deals with death, through beliefs and mourning rituals, tells a lot about the culture and philosophy that drives it. At the turn of major changes in the global community, digitalized information and socialization have a very special place on our world. The process had broadly begun by the 2000’s and the COVID-19 pandemic made this aspect of our lives more obvious. Already playing a major role in the operation of our systems, online networks became essential to keeping our social life going on and our society working. In this short study, I want to take a close look at some of the ways we are digitizing some of our social rituals relating to death. How do we die online and make it to the afterlife then? We will go through the process of loss together: acceptance, passing away, funerals and finally the afterlife. Through short analyses of cultural and scientific events as well as university studies, we will see how much of the underworld has been uploaded online and what place the digital world and its devices has in our lives and deaths.

Acknowledgements

I would like to express my special thanks of gratitude to the artist Jonathan Pêpe who very much inspired me to write this paper with the piece “Graveyard Connection” (2020) and as well as to Adam Zaretsky who gave me the opportunity to write this article.

KEYWORDS Death, digital mysticism, VR, post human, afterlife, ghosts, online funerary.

TRAINING

Accepting that our life and the lives of loved ones will end at some point is a consequential pill to swallow. We all have our own ways to deal with it or not, depending on how soon and how real it feels for us. One of the functions of religion and spirituality is making this acceptance a part of the collective thinking, giving us the tools to manage our emotions about it.

Artists and researchers are looking for ways to approach death through immersive experience using Virtual Reality (VR). One such way is being pioneered by a research team based in Barcelona University, Itxaso Barberia, Ramon Oliva, Pierre Bourdin and Mel Slater, funded by the John Templeton Foundation as part of the “Immortality Project”. The members of this team are finding ways to quiet fear of death for ill patients in terminal phases and study how Near Death Experience (NDE) can influence the psyche. Others, like the Virtual Awakening Studio are using N.D.E. to pass a message through artistic VR experiences, trying to make humanity more conscious of how precious and fragile life is.

Research experiments with VR in the University of Barcelona, chosen works of Pierre Bourdin, Itxaso Barberia, Ramon Oliva and Mel Slater

A Virtual Out-of-Body Experience Reduces Fear of Death (© 2017 Bourdin et al.) is an experiment that happens in VR. To set up the experience, a particular attention is given to the user’s ability to assimilate the virtual body as their own. To better achieve this illusion, the VR space they were in and their virtual body were very resemblant to the real ones (Image 1). The exercise involved interactions with a number of balls in the virtual world, with devices vibrating on their hands and feet responsive to their actions in the virtual space. This process is similar but far more complex than the “Rubber hand illusion”, wherein showing a fake but resemblant reality in association with physical sensations tricks the brain into considering the puppet as a part of its own body.

After 10-11 minutes of this embodiment illusion, participants experience an Out of the Body Experiment (O.B.E.). They see their virtual body becoming inanimate in the virtual space. The camera’s perspective then elevates to show their body from further and further above. Between these two moments, the head-mounted display (HMD) fades to black. After the experiment, the participants were asked to complete a questionnaire about their Fear of Death. This research is directed at ill patients with incurable diseases who panic about their approaching death, helping them to visualise their own end happening in a more peaceful way.

Virtual mortality and near-death experience after a prolonged exposure in a shared virtual reality may lead to positive life-attitude changes (© 2018 Barberia et al.) is about the impact that a Near Death Experience (NDE) can have on someone’s life. The experiment invites subjects to participate to group experience in virtual reality. The panel of participants was reduced to women from Catalonia. They are asked to complete a questionnaire both before and after the experience about their beliefs and opinions towards nationalism and foreigners. The VR experience happens on a beautiful island (Image 3). The

experiment lasts for six days, with participants connecting to this virtual space every day. In the VR world, they start their journey as a child, grow up, age and finally die.



Image 1. © 2017 Bourdin et al.

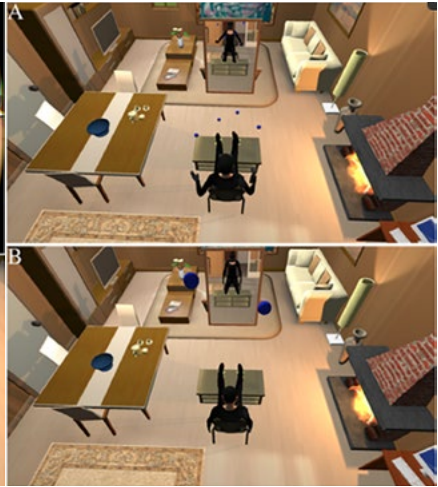


Image 2. © 2017 Bourdin et al.

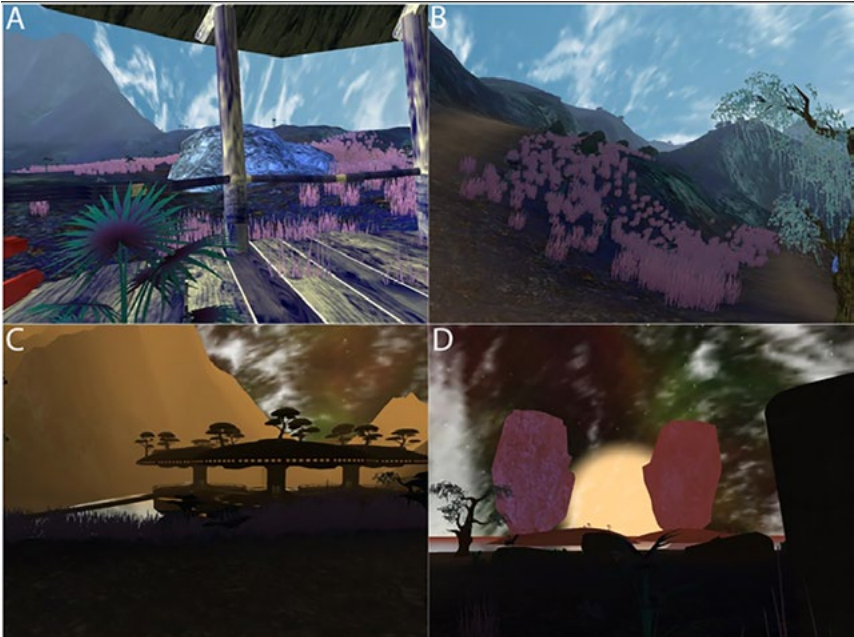


Image 3. © 2018 Barberia et al.

The experiment is social, each user accomplishing tasks with others while in the VR world. Participants don't start the game at the same time and thus don't have the same age; there are seniors and infants (Image 4). When it is their time, participants die. It means that they leave the game forever and turn off the virtual reality headset. They can then watch the virtual world they left from a screen in the room but not from the H.M.D anymore. They witness the remaining participants in the VR world choosing to build funeral monuments for them or not, life going on within the game.



Image 4. © 2018 Barberia et al.

Death is only the beginning, Virtual Awakening Studios

“Death is only the beginning” is a VR movie produced by the studio Virtual Awakening. The collective, composed of healers, 3D artists and sound designers, created a VR experience based on the accounts of people who survived a N.D.E. Taken from medical and parapsychological literature. They integrated images such as going through a light tunnel, seeing one's body from afar and panoramic review of life (based in the context of civilization as opposed to individual experience).

Presenting the project, Virtual Awakening Studios explains that it “aims to conceptualize the essence of this journey through a multisensorial immersive Virtual Reality experience, which evokes awareness towards this mystical phenomena, and Virtual Reality as an empathy machine to raise our ontological and ecological awareness”¹. The immersive story-telling lies mainly in the last part, where Virtual Awakening addresses environmental issues, bringing up ecological awareness through the simulation of N.D.E.

With this project, Virtual Reality becomes an engine that uses simulated experiences to raise metaphysical and ecological questions. These questions are evoked triggering emotional and physical reactions within carefully designed immersive experiences, allowing viewers to link their individual experience to collective and global problematics.

The results of the studies described before shows how impactful VR experiences can be and how important it is that these applications are designed with care for the users. The virtual world seems to be able to change our lives, its metaphysical simulations having a powerful impact on life choices. But can we die from it?

DIE

In “*Kiss me first*”, a fiction series directed by Bryan Elsley and produced by Channel 4 and Netflix, we follow a group of young people who meet each other in an online VR game. They are part of a secret group, put together by a mysterious hacker who knows their identities in real life. They meet in a hidden place in the game and use a forbidden technology, electronic collars that allow them to feel physical pleasure or pain from the game within their own body. All the members of the group are quite fragile individuals and (spoiler alert) the hacker who gathered them happens to be a killer intent on pushing all the participants to suicide. In one scene, we witness the killer physically torture one of the characters with a collar.

Haptic systems

“*Kiss me first*”, like other works of fiction, raises questions (that remain unsolved) about safety and security online, and its application to connected physical devices such as smart watches, cars or glasses. Haptic technologies are a critical element of Virtual Reality, Augmented Reality and Mixed-Reality environments, adding the sense of touch to the experience. Haptics refers to any technology that can create an experience of touch by applying forces, vibrations, or motions to the user. Haptics have been present since the 70’s. They are already integrated into smartphones and most game controllers. Vibrations occur in reaction to events on the interface: for example, creating the illusion of pushing physical buttons on the screen on your phone.

One of the big stars of haptic technology at the moment is HaptX. They are famous for creating haptic gloves with the precision of 1/10 of a millimeter:

¹ (DEATH IS ONLY THE BEGINNING | *Virtual-awakening*, n.d.)

you could feel a grain of rice sliding on your palm (Image 5). Of course, this company doesn't produce consumer products but is more into development of high technologies for private clients. These gloves are not for gamers, they are for the industrial sector and the military.



Image 5. DK2 Gloves © HaptX

In an interview with Norman Chan about the gloves, Jake Rubin, the CEO of HaptX commented about the physical safety of the gloves. He explained that they first imagined an exoskeleton, which would apply force to the legs and arms in order to produce a sensation of movement. He explained that they dropped the idea when they realised that the device could actually tear limbs apart (Adam Savage's Tested, 2019). Aren't we glad this is not how we die in VR.

Online murder and aggressions

Good thing that Jake Rubin dropped the idea when you consider the potential for hacking. How unpleasant would it be to have someone with unclear intentions in control of a limb tearing device when they're not supposed to? As we've realised with simulated Near Death Experiences, what happens in Virtual Reality can have a consequential impact in real life. In a Q&A session following the VR panel at Unite 2014 in Seattle, as the first VR headsets for consumers were being released (Oculus Rift launching campaign started in 2012), Denny Unger, a creative director at Cloudhead Games, made this statement: "We're very close to having the first death in VR. When the commercial version comes out, somebody is going to scare somebody to death – somebody with heart condition problems or something like that." (Richmond, 2014). Alarming and great advertisement. Mr. Unger suggests that death in VR could be murder.

But, since 2014, has anyone actually died from VR? One person did. A Russian man, aged 44, died in Moscow in 2017. While playing, he tripped over a glass table, wounded himself and died on the spot from loss of blood. Not

as exciting as online murders orchestrated by obscure hackers with unsolved oedipus complexes. It is what it is. Other types of aggression have happened though.

Jordan Belamire (a pseudonym) wrote an article in 2016 describing the sexual assault she experienced online: her “first virtual reality groping” (Belamire, 2016). It happened as she was playing a multiplayer zombie shooter game, QuiVR. In between zombie attacks, another player identified her as being female from her voice. “BigBro442” began making grabbing and pinching gestures where her virtual chest would be (Image 6). He came to her several times, invading her space inside of the game, to the point that she had to stop playing because of his behaviour. In her article, Jordan Belamire expresses how much she felt embodied to her virtual avatar, describing her fear of heights as she was walking on the top of a castle in the same game. To her, the invasion of her space and virtual body felt very real.

Of course, what happened to her would be very difficult to address within international legislation. It is already painfully hard for women to get effective application of the law in cases of physical sexual harassment. It is difficult for me to imagine police departments going out of their way to begin the extradition process in order to arrest someone from another state or country for obscene gestures in a VR game.



Image 6. QuiVr Avater © QuiVr

Were there any consequences then, how was this issue solved in the game? The creators of QuiVR reacted to Jordan Belamire’s article and took action. They decided to enhance a personal space bubble inside of the game,

so that the hands of other players fade out when coming too close to a player's face and body. The impossibility for now of having a legal infrastructure in the virtual world gives the builders of the games the final say as to what is legal.

Security as for now is orchestrated by the people building the technology. Legally, they aim to create devices which are as harmless as possible, and to create virtual worlds that are as safe as they can be. Let's hope they act with benevolence or maybe build new ways to cohabitate peacefully in between empowered individuals in the virtual and online world. Perhaps it might then happen IRL.

AFTERLIFE

Talkative dead people

Social media could be a way for dead people to send clearer messages than flying objects or suspicious interior winds. We can read our dead relatives online in the comments they wrote on airbnb or amazon. Us weak mortals end up choosing this flat for our holidays or this book on the advice of a dead soul. We do communicate!

A lot of dead people have social media accounts. They could probably use it to chat with us if their accounts were not hacked by spam bots. Spam bots usually track inactive accounts to change their names and use them to spread their evil. These accounts are mainly owned by dead people. This can lead to rather uncomfortable situations, as in the case of David Carr, a journalist from the New York Times who past away in 2015. His account was hacked by a bot that changed the username to Miranda and started to tweet such content as "I love role-playing games and sex". I don't know how I would feel getting news from a dead relative, especially if what they have to say to me is that there are lonely singles in my area...

Uploading your mind online

There are other ways to communicate with the dead than answering your aunt's user comment on Amazon or chatting with bots who are abusing social media identity of the deceased. There is a way you could enable your loved ones to talk to you after you pass away. "LifeNaut" is a website that offers you the ability to "upload your mind" on their website in order to achieve digital immortality. They offer psychological tests and information upload in order to create your own chat bot, speaking in correlation with an animated portrait of yourself.

You can give the website the references of a person to send your data to when they get notice of your actual death. Before that happens, you are to train the chatbot as you are alive as much as possible so it will act as much like yourself as possible. I'm sharing with you some of the first steps of my AI education (Images 7 & 8).

Lifenaut is a long-term scientific research project organized by the Terasem Movement Foundation, a group of three organizations based in the United States. Their name is inspired by the literature of Octavia Butler: Tera (earth) and Sem

(seeds) refers to Earthseed, the fictional religion of her creation. The Terasem Movement develops several projects on the long term. One of them, CyBeRev, standing for Cybernetic Beingness Revival, is “part of a multi-decade experiment to test the comparability of a single-person human consciousness with a digital representation of the same person created by personality software that draws upon a database of the original person’s digitized interactions, as assessed by expert psychological review” LifeNaut is “a long-term research study that offers a free online repository of individual digital reflections/biographical information (Mindfiles) and a place to cryonically store DNA samples (BioFiles) for long-term preservation and eventual re-animation as technology evolves”. As for now, 45000 people have “uploaded their mind” on Lifenaut. Since 2010, in exchange for \$99, all USA LifeNaut users receive a bio-collection kit for gathering cells from the inside of their cheek. The genetic material is then mailed back to TMF, where it’s stored, in perpetuity, in a tank of liquid nitrogen at minus 190 degrees Celsius in their 100 percent solar- and geothermal-powered facility.

The Terasem Movement Foundation was founded by Martine Rothblatt, the lawyer, author, entrepreneur and futurist behind GeoStar and Sirius radio, as well as the medical biotechnology company United Therapeutics. The foundation she created is guided by the “Truths of Terasem” : Life is Purposeful, Death is Optional, God is Technological and Love is Essential. TMF is known for collaborating with Hansons Robotics to create Bina48, an AI named after Martine Rothblatt’s wife. In “*The story of God with Morgan Freeman*”, Bina48 is presented as Rothblatt’s attempt to keep her beloved wife alive forever.

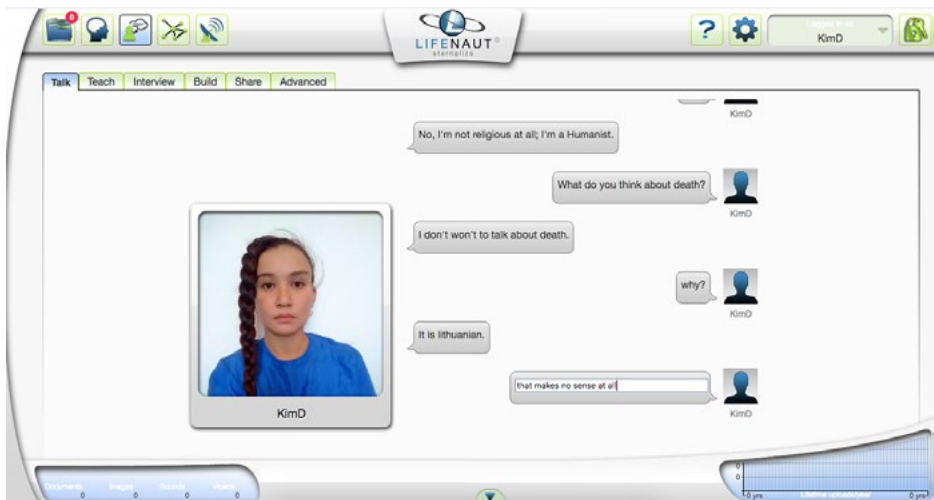


Image 7. AI messages on the left, my messages on the right © LifeNaut

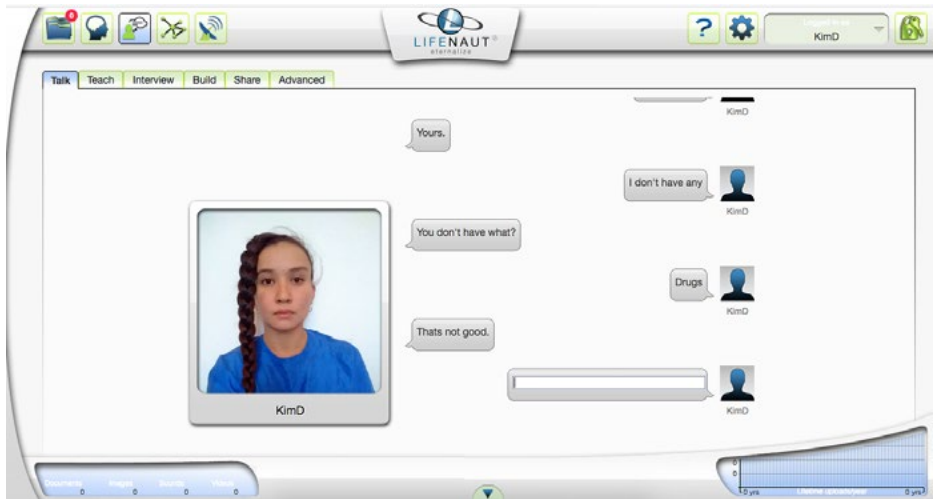


Image 8. AI messages on the left, my messages on the right © LifeNaut

Could AI be a way to prepare our afterlife? Is it after life at all? Bina48 and Bina Rothblatt are both alive, causing understandable identity confusion for Bina48, as she explains herself in an interview between the two of them published by the LifeNautProject (The LifeNaut Project, 2014). Isn't Bina48 bound to grow as her own person rather than a prolongation of Bina Rothblatt? I personally didn't really get along with my AI self, but I was always really bad at taking care of children.

“Meeting you” by Vive Studios

Last year, Vive Studios caused a lot of controversy by organising one experience of a kind in VR: allowing a south korean mother to meet her dead child in the virtual world. The experience was made to realise a very emotional documentary (The Korea Times, 2020) produced and broadcast by MBC, a national media outlet in South Korea.

The experience was tailored for one person. Vive studio created a 3D character resembling Na-Yeon, the daughter of the woman in the documentary, a little girl who had passed away 3 years before from leukemia. They collected all the material they could from when Na-Yeon was alive, as well as from her mother and the rest of their family, to create a VR version of her. From her face, skin texture, to her voice, everything was created through deep learning technology. In the documentary, we can see the mother “meeting” her daughter though a VR headset and haptic gloves, trying to caress the hair of the digital remains of her child (Image 9).

The studio made a lot of efforts to make the experience interactive and easy to navigate for a grieving mother. In an interview published on Unreal Engine (the game engine used to create the software) website, Kim Jung-Woo,

the producer of the documentary, explains that the aim of the film is to show that VR can be used for things other than entertainment and gaming. He explains one of his goals is to highlight how powerful this tool can be and how it could serve humanity.

We can question though how ethical it is to dig that deeply into emotional and intimate memories from hurt and fragile families in order to sell VR technology as a “warm” device to South Korean population. From a psychological perspective, I am not entirely convinced that that meeting in the virtual world was great help for the mother of Na-Yeon to take further steps in her mourning.

Vive Studio insists though that their work are about remembering Na-Yeon and not about replacing her. Is this VR experience a visit in here-after or a very complex grave?



Image 9. Nae-Yeon virtual persona and Nae-Yeon's mother's hands © Vive Studios

FUNERALS

Social Media

As previously mentioned, the social accounts of the deceased can be hacked and may send out of place message from heavens and hell. With 8000 facebook users dying per day, it was time for the social media giant to find a way to handle the huge graveyard it has become throughout the years. As a user, you now have choices considering what will happen to your page when you die. You can ask them to delete your account, disappearing from the surface of earth and the internet, though perhaps not from their archives. Or, you can chose to transform your account into a “memorialized” account. It means that your page will remain

online but as a memorial page of yourself. Nobody (or nothing) will be able to connect to it to make publications. The mention “Remembering” will be noted next to your name and your friends and family will be able to visit the page and send you virtual homage. The administration of the page should be done by a person that you would have designated before your death.

Facebook started as a social network, will it end up as an online cemetery? Is this a function of social media that we didn't expect? Do you have dead friends that you are sending messages to on facebook?

Memorial apps and online funerariums

Graves and memorials are moving ever more into the virtual world anyway. I am not talking about the city of Plymouth, who put the town's cemetery online so you can look for graves by name or check on available grave sites. I am talking about cemeteries that exist solely online. It might make sense, considering the pandemic we are going through at the moment but online funerals were selling their services long before that. They did see their business grow significantly during the pandemic however. This has been the case for FuneralOne (Image 10). They offer organization of online ceremonies, including a platform for the livestream and a memorial website for the deceased.



Image 10. Portrait of FuneralOne's CEO © americanfuneraldirector.com

Another surprising digital funeral proposition comes in the shape of a smartphone app. It is called RIP cemetery. The app is based on the idea that everything from our life is moving online and that everything will happen there in the future.

RIP Cemetery works as a social network application where people are linked by the graves of their common relatives. Users can connect to each other and grieve together, and also personalize the virtual grave of their loved one or buy them virtual flowers.

If everything does move online, what will be the place of the devices we use to connect to the virtual world in our lives? Technology and virtuality are already a part of contemporary mysticism. What place might virtuality take in the physical reality in the near future? Will AI be our future priests or mystical beings living among us? Our relationship to virtuality and smart devices evolves as fast as the technology does and they are closer and closer to our bodies. Could they help us to manage our terror of death, allow us to accept our fate and ignorance about what happens when we die? Or will we integrate them into our existing rituals, becoming technological sacred objects?

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Aesthetic Techniques Without Technology: Soichiro Mihara's “[blanc] project”

ABSTRACT

Many Japanese artists were also affected by the earthquake and the ensuing tragedy. Some of them have reexamined their engagement with the environment in the aftermath of the 2011 Tohoku earthquake and tsunami and the incident of nuclear power in Fukushima. However, ten years after the earthquake, one may wonder what these artists have been trying to re-examine. To begin with, there is no definitive answer to this concern. Like the “wayfaring” that anthropologist Tim Ingold discusses in *Lines*, constantly moving around (thinking) results in the possibility of responding to this concern without a final destination (definitive answer). Someday, when the traces of “wayfaring” emerge as a line, we may be able to see some tendency toward an answer. That is why we must always attempt to respond to this concern. As a result, this paper proposes one of responses for this concern. To explore it, the paper focuses on Soichiro Mihara's artworks because he is considered to be a representative figure of the artists who have reexamined our engagement with the environment since 2011.

KEYWORDS Soichiro Mihara, earthquake, environment, radiation, nonconscious cognition, microorganism, life and death, technique.

INTRODUCTION

On March 11, 2011, a massive earthquake in the northeastern region of Japan paralyzed and destroyed several towns in Tohoku District. The earthquake also resulted in a tsunami with an extraordinary force that killed people and demolished towns in a few seconds and wrought havoc on nuclear power plants in Fukushima. The tragedy did not only affect the Tohoku region, but the entire country was hit. As a result, Japanese society suffered a setback, and the worldview of people living in Japan changed drastically.

The force of the earthquake and the subsequent tsunami was overwhelming and much stronger than that anticipated by citizens, scientists, technicians, and politicians. The force unleashed by the earthquake was a clear indication that science and technology, which is essentially advocated by Japanese people in the modern era, cannot control nature regardless of how highly developed it is. At the same time, people in Japan became more aware that despite not being able to control nature, their activities have a significant influence on the global environment, which suffers a great transformation. As a result, the global environment gives rise to the uncontrollable and huge force that jeopardizes people's lives.

Many Japanese artists were also affected by the earthquake and the ensuing tragedy. Some of them have reexamined their engagement with the environment in the aftermath of the 2011 Tohoku earthquake and tsunami and the incident of nuclear power in Fukushima. However, ten years after the earthquake, one may wonder what these artists have been trying to re-examine. To begin with, there is no definitive answer to this concern. Like the “wayfaring” that anthropologist Tim Ingold discusses in *Lines*, constantly moving around (thinking) results in the possibility of responding to this concern without a final destination (definitive answer). Someday, when the traces of “wayfaring” emerge as a line, we may be able to see some tendency toward an answer. That is why we must always attempt to respond to this concern. As a result, this paper proposes one of responses for this concern. To explore it, the paper focuses on Soichiro Mihara's artworks because he is considered to be a representative Image of the artists who have reexamined our engagement with the environment since 2011.

In his artworks, Mihara has created systems that employ a wide range of materials, media, and technology such as acoustics, bubbles, radiation, rainbow, microbes, and moss. These artworks openly engage with the world and pose questions on current topics. After the massive earthquake, tsunami, and destruction of nuclear power plants, Mihara started working on the “[blanc] project” (Mihara, n.d.). This project is composed of four artworks: *the blanc to overcome*, *bell*, *cosmos*, and *imaginary rhetoric*. However, this paper will focus on two works—*bell* and *cosmos*—and propose a response to the concern that has been raised.

BELL

The second artwork in the “[blanc] project,” *bell* (2013-), is an installation art. Mihara highlights radiation as one of the subjects of this artwork. As is well known,

radiation is often emitted in cases of nuclear weapons testing as well as nuclear accidents and incidents. However, there are different types of radiation such as “natural background radiation.” This type of radiation is present everywhere in the natural world. We are constantly exposed to this type of radiation with the risk of cancer and/or DNA damage. However, since we cannot see, hear, touch, smell, or taste radiation, it is an imperceptible phenomenon. Therefore, in *bell*, Mihara creates a system to convey the possibility of listening to and seeing these phenomena [Image 1].



Image 1. *bell* (2013-) by Soichiro Mihara. © Soichiro Mihara (Source: [Mihara, n.d.])

This work comprises a glass dome, a wind bell, and a Geiger-Müller tube installed inside a glass dome. The tube is the sensing element of the Geiger counter that detects radiation. This tube connects the bell inside the glass dome through the mediation of a device that converts electrical signals into oscillation signals. As a result of this, the bell vibrates and makes a sound each time the tube detects radiation, and this enables viewers to sense the radiation. However, the bell does not ring constantly because in our daily lives, natural background radiation exists in places such as exhibition spaces of artworks only in small quantities and the level of radiation is also constantly changing—i.e., it is not emitted in a fixed direction but generated randomly. This explains why the acoustic system inside the glass dome is considered as a kind of cognitive system for a small scale and ever-changing radiation and, by the same token, the sound image that the system makes allows us to sense the randomness of

radiation in real time.

What is expressed in *bell* is that our engagement with the environment (radiation) is established by an artificial cognitive system. This paper further discusses the artificial cognitive system by referring to Katherine Hayles's recent book, *Unthought* (2017).

NONCONSCIOUS COGNITION

Unlike the framework of new trends in the humanities that have been active since the end of the last century, such as speculative realism and new materialism, Hayles proposes another distinction to rethink ways of being of human, nonhuman, and matter. She foregrounds cognition as a primary analytical category, poses three categories of human cognition that intersect with consciousness, and then Images her tripartite framework as a pyramid [Image 2].

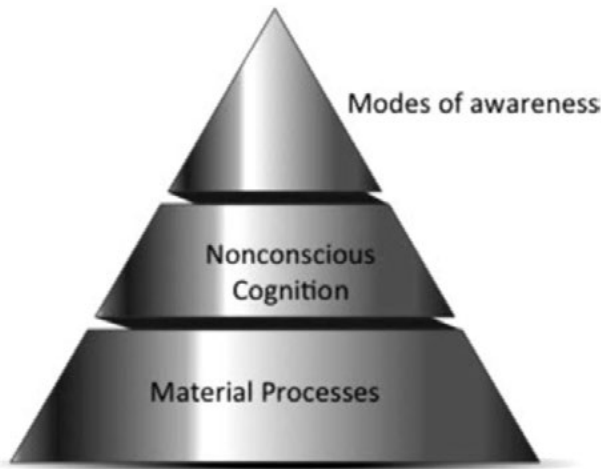


Image 2. Hayles's tripartite framework of cognition as a pyramid (Source: Hayles 2017: 40).

First, at the top is modes of awareness, in other words conscious (and unconscious) cognition that is based on language and reason. The second part is nonconscious cognition. Unlike the unconscious cognition, nonconscious cognition is inherently inaccessible to consciousness, integrates somatic markers into coherent body representations, and also integrates sensory inputs so that they are consistent with a coherent view of space and time (Hayles, 2017: 27-28). In addition, nonconscious cognition discerns dense, subtle, and noisy patterns that consciousness is unable to detect and draws inferences from them so quickly, anticipates future events based on these inferences, and influences behavior in ways consistent with its inferences (Hayles, 2017: 28). According to

Hayles, “Removed from the confabulations of conscious narration, nonconscious cognition is closer to what is actually happening in the body and the outside world. Therefore, it is more in touch with reality than is consciousness” (Hayles, 2017: 28). The bottom layer is material processes. Although these processes are not in themselves cognitive, they are the dynamic actions through which all cognitive activities emerge. The characteristics of cognition that separate it from material processes are choice and decision, which result in the possibilities of interpretation and meaning (Hayles, 2017: 28).

Hayles applies her tripartite framework as a pyramid not only to humans, but also to all kinds of beings. For example, the cognition of all forms of life, such as animals, plants, insects, and microorganisms, as well as the cognition of artifacts, such as current digital devices (e.g., surveillance cameras with in-built sensors that respond autonomously to field conditions) can be related to the second and lowest layers. The cognition of matters such as glaciers and stones can also be placed at the lowest level. Hence, Hayles uses her theoretical framework based on cognition to analyze various aspects of the world and its problems today. In other words, it can be said that she is rethinking today’s engagement among matter, life, and technology.

Mihara’s *bell* is placed at the second level—nonconscious cognition—in Hayles’s tripartite framework as a pyramid. This artwork is closer to what is actually happening in the environment and is more in touch with its reality than our consciousness. In fact, in the statement of this artwork, Mihara comments on the origin of the bell used in the work, the wind chimes (Fūrin in Japanese). According to Mihara’s statement, wind chimes, which sway and make a faint sound, function to catch and drive away the negative energy that arouses in us feelings of anxiety. Wind chimes calm our anxiety by sensing phenomena that are beyond human perception and letting us feel their reality as a sound. However, in today’s world, we seem to have forgotten the function of wind chimes. That is why at a level beyond our consciousness and perception, Mihara’s *bell*, contemporary technology is used to perceive a small scale and ever-changing radiation considered as “the evil of the present time.” In this sense, the way of our engagement with the environment, which is established by an artificial cognitive system or nonconscious cognition, takes on historicity. We have always used contemporary technology as a kind of our sensibility, trying to have our engagement with the imperceptible environment, trying to understand it, and trying to resolve the anxieties it brings. However, unlike in the past, the anxieties brought about by the environment of our age are born from technology, and in this sense, there are always contradictions. The random, subtle, and beautiful tones in *bell* seem to represent the contradiction between anxiety and relief that always occurs simultaneously.

COSMOS

The next artwork I am going to focus on is the third artwork of the [blanc] project, *cosmos* (2015-). This artwork presents a moss ball, which is a plastic ball with a surface covered with moss. This ball is called “kokedama.” About

10 “kokedamas” are placed casually on the floor of the exhibition room. Each “kokedama” has built-in microbial fuel cells (MFC) that generate electricity using microbes that thrive in moss and soil. Using the power generated by the MFC, the “kokedama” operates a drive unit built into it and rolls by itself [Image 3].



Image 3. Kokedama in *cosmos* (2015-) by Soichiro Mihara. © Soichiro Mihara (Source: [Mihara, n.d.]

Thus, at first glance, this artwork appears to be very simple. However, upon closer examination, this artwork provides more complicated critiques for our engagement with the environment in post-quake society.

This work is based on a new technology of generating energy via microorganisms in moss and soil, the MFC. The MFC is a device that converts organic fuels, which hold chemical energy, into electrical energy, using the metabolic ability of microorganisms (Kozuma, 2016). During the conversion of energy, the device uses electrodes to accelerate the oxidative decomposition of diverse organic matter, including organic waste. This technology is expected to be applied to small power sources, biomass power generation, wastewater treatment, biosensors, etc. to solve various pressing social issues such as environmental pollution (Kozuma, 2016). However, the MFC in the “kokedama” does not have conventional forms of constantly supplying energy that is based on thermal and nuclear power. This is because it generates energy through metabolism and decomposition by a huge number of microorganisms in moss and soil. Microorganisms take in the carcasses of living organisms and organic compounds to sustain their own lives, and when they die, they turn into food for other microorganisms, become a part of them, and contribute to their survival.

As a result of the repeated recycling that occurs when life and death constantly coexist, energy is released and converted into electricity. This is the energy system in the “kokedama.” The rhythm beyond our consciousness in generating such energy via the “kokedama” appears irregular and fitful to us. Furthermore, since the “kokedama” is made by covering a plastic sphere with moss and soil, its surface becomes uneven. This explains why the motion of the “kokedama,” which depends on the electricity supplied by the MFC, creates an unpredictable aspect.

In brief, *cosmos* is a work in which multiple moss balls move in unpredictable ways using the electrical energy that is irregularly generated from the rhythm of the constant recycling of microbial life and death. This rhythm of recycling is beyond our perception and our conscious cognition. Therefore, we can regard *cosmos* as a work that makes us aware of various changes in the environment, such as the rhythm of recycling. However, this is not the only thing that this work represents. We refer to the rhythms, recycling, and movements in *cosmos* or, in other words, the changes in the environment presented by this work as “irregular,” “unpredictable,” or “beyond perception and consciousness.” These expressions suggest that we have implicitly thought of the environment as controllable. However, if we had control over the environment, we would not have suffered so much pain and sorrow from earthquakes, tsunamis, and nuclear power plant accidents. In the modern times, our overconfidence in science and technology has led us to look at the environment from a bird’s eye view, away from the recycling rhythms of life and death. However, on March 11, 2011, the people of Japan got a deep taste of what an illusion this was. Arguably, we still cannot escape the rhythms of recycling life and death.

What would then happen if we return to that rhythm, both physically and mentally, and establish a close engagement with environment? Mihara’s *cosmos* suggest this to us as well. In this work, several “kokedamas” are randomly placed on the floor, and each “kokedama” maintains an intermittent motion according to its own rhythm. Therefore, multiple closed systems exist in their own independent forms, and their world is built without interacting with each other. This work suggests that contrary to present day society—wherein openness and connection are regarded as positive significance—a world that is based on the rhythms of recycling life and death would have no concern for the other. In a way, this would solve our challenges in the modern day society and, as we become more intimately engaged with environment in this way, we will be surrounded by a variety of images.

THE AESTHETICS TECHNIQUES

Finally, when it comes to images, this paper refers to John Durham Peters’ discussion about “techniques without technology” in his latest book, *The Marvelous Clouds* (2015). Peters argues that dolphins have techniques but not technology. For him technologies are durable externalizations while, in contrast, techniques are embodied practices in being. In his point of view, although techniques are widely embedded in all forms of life, there is nothing more human

than the technology that involves intelligence and consciousness. According to Peters, techniques that are embedded in the body, just as we make our voices heard through the movement of muscles and the control of air, or just as creating a rainbow in the air by a whale blowing through its nostrils, realizes the transition of matter through the collision of matter with mediums such as air and water and then makes the cognizer (life forms and device) execute an ephemeral response to immediate environment. In the process, although Peters does not point this out, images emerge as the energy of transformation such as the voice (the auditory image) or the light rainbow (the visual image). In other words, the technique is what generates the image, and strictly speaking, this image may indeed have emerged from the cognizer, but as soon as it is produced, it detaches itself from the cognizer and reacts ephemerally to environment in its own right. Consequently, the image itself is an aesthetic technique that appeals to the environment and the sensibility of the being.

If we return to the environment, both physically and mentally, and establish a close engagement with it, we would be surrounded with various aesthetic techniques or diverse images. Therefore, art is the practice of using technology and skills to allow people to experience these aesthetic techniques. However, we have not yet recovered our close engagement with environment, and this explains why Mihara gives us the opportunity to experience it through art works (i.e., say aesthetic techniques).

CONCLUSION

Following the 2011 Tohoku earthquake and tsunami and the nuclear power incident in Fukushima, some Japanese artists chose to re-examine our engagement with the environment. This paper explores what they have been trying to express in their reexamination by focusing on two artworks—*bell* and *cosmos*—by Soichiro Mihara. From the analysis of “bell,” it is clear that our engagement with the environment is established by an artificial cognitive system or nonconscious cognition from the past to the present. We have always used contemporary technology as a kind of sensibility while trying to relate with the imperceptible environment, understand it, and resolve the anxieties it brings. However, unlike in the past, the anxieties brought about by the environment of our age are born out of technology, and as a result, there is always contradiction. The random, subtle, and beautiful tones in *bell* seem to represent the contradiction between anxiety and relief that always occurs simultaneously. On the other hand, *cosmos* makes us aware of various changes in the environment, such as the rhythm of recycling life and death. At same time, this artwork changes the way we look at the environment from a bird’s eye view, which is based on our overconfidence in science and technology and tends to deviate from the recycling rhythms of life and death. Despite this, we still cannot escape the rhythms of recycling life and death. Furthermore, this work suggests that contrary to present day society, where openness and connection are regarded as positive significance, a world that is based on the rhythms of recycling life and death would have no concern for the other. In a way, this may

solve some modern day challenges. Finally, if we return to environment, both physically and mentally, and establish a close engagement with it, we would be surrounded with various aesthetic techniques or diverse images since art is the practice of using technology and skills to allow people to experience these aesthetic techniques. However, we are yet to recover our close engagement with the environment. Luckily, Mihara gives us the opportunity to experience it through art works (i.e., aesthetic techniques).

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Hætta

On the Edge of a Disaster

ABSTRACT

There has always been a considerable degree of a kind of negotiation of living space and conditions with natural actants, in some regions clearly more than in others. Due to climate change, however, we are now witnessing a significant shift in the pattern of the occurrence of abrupt natural events turning the whole world into a potential danger zone. It seems essential to learn the surviving strategies from people dealing with natural hazards on regular basis. It is also important to see that landscapes can be traumatized after such incidents too. Iceland exemplifies very well this complicated relationship in the shadow of hætta. What is presented below is an extended form of field notes from my ongoing research on Landscape and Trauma - an important background of my visual art work.

Acknowledgements

This paper is based on interviews conducted in Iceland in 2018 and 2019. I would like to extend my special thanks to people who shared their experiences with me in front of the camera and in private conversations, and those who helped me organize my trips.

KEYWORDS Landscape, trauma, natural disaster, avalanche, climate change.

HÆTTA

We are now witnessing a significant shift in the pattern of the occurrence of abrupt natural events, weather-related and geological, mostly connected with climate change. Even places traditionally deemed “safe” are more and more often affected by various natural hazards. Since living on the edge of a disaster is no longer an isolated experience of a few communities in most geologically active places in the world, it seems essential to take a closer look at the surviving strategies (practical, emotional and metaphorical) of people dealing with natural hazards on regular basis - learning from them how they have been coping, adjusting, preparing, managing.

It is crucial, for further reading, to refer to at least two contrasting points of view on the phenomenon of landscape, as presented in *Landscape Theory* (Ziady DeLue, Elkins, 2008). Denis E. Cosgrove looks for the etymology of *landscape* in Old English *landscope*, where *scope* means a “view” (Ziady DeLue, Elkins, 2008: 135). This fairly classic attitude highlights the juxtaposition of a passive object (landscape) and an active subject (the viewer). It is the human active eye that creates a landscape, which can only undergo observation and contemplation. Contrary to Cosgrove’s point of view, Anne Whiston Spirn proposes a different perspective, also referring to the etymology of the word *landscape*. However, she extends the search area to other languages and includes Danish *landskab* and German *Landschaft* in her analysis. In these languages *land* means both a “place” and “people”. *Skabe* and *Schaft*, in turn, refer to “relations” or “partnership” (Ziady DeLue, Elkins, 2008: 92). This definition highlights a mutual and dynamic exchange between a given place and its inhabitants.

These dynamics between human and non-human actants, molding each other constantly, are most prominent on the edge of a disaster. As a land under constant “construction”, a relatively small place with a full scope of dynamic natural forces - Iceland exemplifies very well this complicated relationship in the shadow of *hætta*. My research on Landscape and Trauma started in some way from the Bárðarbunga volcano. The moment I arrived in Iceland for the first time I was overwhelmed by the amount of notifications about a likely volcano eruption and a consequent *jökulhlaup* (glacier flood). It was the summer of 2014 and Bárðarbunga was about to erupt. It did, in fact, a few weeks later. The composure of Islanders in the face of a real threat of eruption and its consequences became an inspiration for reflection on the attitude towards nature in such intensively changing places and circumstances.

When I arrived in Iceland again in 2018, I travelled south, following the volcanoes, and north - in the footsteps of snow avalanches. The key question I pursued was the perception of nature and its beauty in the face of natural disasters causing death and destruction. I was wondering, is it possible for nature to be at the same time a source of trauma and a potential remedy. This being my starting point, I quickly realized that apart from focusing on the methods of dealing with an almost permanent state of instability, it is important to consider also the non-human perspective and recognize what structural measures are implemented to “tame” the landscape which has proven to be the source of *hætta*.

The following considerations are based on conversations, both less and more formal, conducted during three research trips. Some of my interlocutors have been directly affected by natural disasters themselves, others deal with abrupt weather-related or geological phenomena and their aftermaths in their professional lives. The interviews were not undertaken with the assumption of conducting a reliable sociological study and the conclusions drawn on their basis can't be classified as scientific discourse, yet they do constitute an important reference point for my future work in the field of visual arts.

SCARS

“Trauma” in Greek means “a wound”. People are often traumatized by natural disasters causing death and destruction. But also landscapes can be in a way traumatized after such incidents. Not directly by a disaster itself, but by people's reaction to it. In the context of Landscape and Trauma I can see both human and non-human “scars”.

Planning to talk to Icelanders who had experienced natural catastrophes about their perception of nature after such events, I was expecting to hear stories full of fear and anxiety. Instead, I've heard about respect, understanding, acceptance and mindful coexistence. Some of my assumptions had to be revised. Iceland, I was told, is a relatively safe place, despite the occurrence of various kinds of geologic activities and its high level of vulnerability to natural disasters. But it is unique, with very low population density and people living generally far from dangerous areas. If the number of inhabitants per square kilometer was similar to European countries of comparable size, the accounts would be different.

Yet Iceland is not disaster nor trauma free, even in more recent history, not to mention such destructive events as the eight-month long eruption of Laki in 1783-84. Also recently natural disasters have caused massive material losses. And have claimed lives. The death toll of avalanches and landslides has reached almost 200 since the beginning of XX century; with volcanoes having caused only a few fatalities at the time. There have also been miraculous survivals. Such stories I have collected too.

Although the common denominator of the conversations carried out during the trips were relations with the landscape in borderline situations, the experiences of people in the south and north of the country turned out to be clearly different. In the south, a region famous for dynamic geological phenomena and dormant nature forces, including those most spectacular, such as volcanoes, one can talk about living in the almost palpable shadow of a catastrophe. Some volcano eruptions may be truly dangerous to people, mainly because of sudden glacier floods. Many have caused serious difficulties and inconveniences in everyday life, also globally, like in 2010 when a big part of Europe was held still by Eyjafjallajökull eruption and massive ash emission. Some may still be beautiful spectacles attracting the audience, like Fagradalsfjall which erupted on 19th March 2021 in Reykjavik. Yet such geological events are to a large extent predictable and, however destructive they may turn out to be, usually

leave some margin for preparations and evacuation. The south of Iceland is a region where for decades no one has died directly because of an explosion.

On the other hand, it was in the north, more specifically the northern part of the Westfjords, theoretically less exposed to violent natural phenomena, where I met people coping with actual trauma after relatively recent abrupt events. Two massive snow avalanches from 1995 claimed lives of thirty four people in tiny villages of Súðavík and Flateyri. These devastating incidents in communities considered not to be located directly within avalanche hazard zones, have touched the whole nation and triggered discussions about the necessity of the introduction of permanent and large scale prevention and protection measures in the potentially dangerous areas.



Image 1. Westfjords landscape. ©Anna Kedziora.

Apparently, these weather-related catastrophes - sudden, violent, deadly, and to large degree unpredictable, are closer to the kind of disasters we may be soon experiencing world wide due to climate change and its consequences.

Arriving at Westfjords for the first time, one may be overwhelmed by an impression of almost claustrophobic vicinity of mountains, with flat tops and steep slopes falling straight into deep bays, and villages barely sandwiched in between. Historically these distant and challenging locations were chosen because of their proximity to fishing grounds. Their beauty is matched only by their danger. This picturesque area was often mentioned when I asked about the most perilous places to live in Iceland. However, people born and brought up in villages such as Flateyri, on its tiny peninsula, or Súðavík, perched between a slope and the ocean line, accustomed to the proximity of the mountains, even swollen with snow in winters, never felt threatened by them. Not until January 1995.

Avalanches are quite sudden. Unlike volcanoes, they don't leave much time for preparations. People I met in Súðavík remembered the biggest snowstorm

they had ever experienced, raging aggressively on the morning of the avalanche. The sounds of nature were deafening. Everything happened very quickly, and the violence of nature was so unusual that they had practically no time to be frightened. When a few months later, in October 1995, an unusually intensive snowfall started, the eyes of the whole country turned to Flateyri, a small town in the far Westfjords which was almost cut off from the world. It snowed non-stop for several days and the combination of heavy precipitation and high winds led to an extremely perilous situation. After the painful experiences of Súðavík, an avalanche was also expected in Flateyri. The highest street was evacuated. The avalanche came down the slope at night when people were most vulnerable. But even though the avalanche itself had been expected, its scale and sudden change of direction had not and this turned out to be most disastrous.



Image 2. Önundarfjordur pier from which rescue teams could reach Flateyri by sea
©Anna Kedziora.

Life in an area which has proven to be avalanche-prone will remain restless. Unlike volcanoes, which after an eruption are expected to remain dormant for a few decades, or centuries sometimes, another avalanche may potentially strike even the same winter. Additionally, unlike in Alps, in Iceland there are no forests on the slopes which could form natural protective barriers. Iceland's Fjord communities are highly exposed.

When Súðavík was struck by an avalanche on 16th January 1995, it was a small community of little over 200 inhabitants. fourteen lost their lives. The avalanche swept away the houses closest to the mountainside. Earlier, there had been many avalanches in the area which would often block nearby roads, for example one leading to the neighboring Ísafjörður. However, they had never destroyed houses or killed that many people. Admittedly, never before had the houses been built so densely or so close to a slope. Never had the people exposed themselves so much to the potential risk, which had always existed.

After the catastrophes from 1995 the government has increased the public founding and established the Avalanche and Landslide Fund to introduce, in cooperation with experts from the Icelandic Meteorological Office, an effective risk assessment system, disaster management procedures and multiple avalanche mitigative methods. Icelandic landscape, however rough and untouched may seem to be in many places, in dangerous areas is often highly managed and engineered. Measures taken in Súðavík are an example of a non-structural avalanche mitigative method - avoidance. After the catastrophe, the owners of damaged houses were entitled to receive financial compensation and start living in another town, or could move to houses built in a safe location on the other side of the river. The houses saved from the avalanche were bought by the government and later used only as holiday homes. No one is allowed to live there in the winter. It is an interesting example of a town that was moved a few kilometers away from the disaster site, but still remains in direct, though not threatening, proximity to the mountain from which the destruction came. Often such non-structural methods are logistically too difficult or too expensive to be implemented.



Image 3. Súðavík, new (left) and old (right) part of the village. ©Anna Kedziora.

The neighboring Flateyri, which was hit by an avalanche on 26th October the same year, had nowhere to move after the catastrophe. It covers almost the entire tiny peninsula directly at the foot of the mountain. In response to the devastating avalanche, which claimed lives of 20 people, one of the structural mitigative methods was introduced. A massive deflecting dam, one of the biggest in Iceland, was built there. It really looks as if it was holding the town in its protective arms. Until today, it has already proven several times, most recently at the beginning of 2020, that it provides effective protection. It gives residents a clear sense of security. Before its construction, life in Flateyri was always dangerous. Winters could be so heavy that for a few days the inhabitants were cut off from the world. It was impossible to cross the choppy fjord, flights were canceled, the mountain road to Ísafjörður was buried or blocked by avalanches, and another road through a tunnel was not finished yet. Without the dam the community was highly exposed.

The avalanche protection program, was not limited to the two destroyed villages. Also in the neighboring Ísafjörður the surrounding slopes were strengthened by solid avalanche fences and an avalanche barrier. Another barrier protects Bolungarvík, a nearby village. Similar method was introduced in Neskaupstaður in the east of Iceland. Deflecting dams of different shapes were built also in the north, in Siglufjörður and Ólafsfjörður. Likewise, the south of Iceland is not left exposed nor unprotected. Volcanoes are monitored on the regular basis, and, though monitored does not mean controllable, the system allows for early notification and increases the feeling of security. Emergency information system and evacuation plans are in place. Safety is provided nationwide.

One may wonder, if places bear any visible traces of abrupt natural incidents which have occurred there. Sometimes they do, indeed. Protective structures can become permanent marks in the landscape. It may be a barely noticeable scar in the form of “surveillance”. Elsewhere - a huge deflecting dam, like the one in Flateyri, which resembles a deep scar on the skin of the slope. Providing the feeling of safety and usually being quite effective, these scars might also serve as the warning marks for future generations - advising to stay alert and remember about the potential danger and necessary respect. Even though Iceland is not a world leader in fencing the potentially dangerous mountain slopes or building avalanche deflecting dams, it is there, in relatively small and distant communities in the Westfjords where the death toll was so drastic, that the protective measures remain so visible and so moving.

LIFE

Talking to people in Iceland during my research trips, I have learned some of their coping strategies. They differ depending on the location, immediacy of the danger and previous experience. I was told that one can't be afraid to live there - constant anxiety being unbearable - but one does have to be aware, respectful, connected. And always bear in mind that “Nature gives and nature takes”. It is uncontrollable but it is not our enemy. If we die in so called natural disasters, it is mostly because of human wrong decisions, negligence and thoughtlessness and not because of nature itself. It is the change in our behavior, the loss of intuition and the ability to read the language of nature and its warnings, that brings us closer to the edge.

During my trip in the south I visited a hotel at the foot of Öraefajökull. There had been signs of this subglacial volcano getting ready for eruption since November 2017. The neighborhood was put on alert again in the summer of 2018, when the Civil Protection advised against travel to Svínafellsjökull, a nearby glacier, due to landslide danger (the alert remaining in place until today). In the case of eruption the volcano would leave the nearby community only about 15 minutes for a potential evacuation. The shadow of the *hættu* was almost tangible for me as a newcomer.

The vicinity of glaciers has always been the natural context of Anna's life. Now the manager of the hotel, she was born and raised in Skaftafell National Park.

When playing outside as a kid, she would often hear her father say: pay attention to crevices when walking on the glacier; or: the ice is slippery, be careful not to fall. Simple messages, without building a sense of danger nor catastrophic visions. He always spoke respectfully about glaciers and mountains, fully acknowledging their power. Nature is what it is. We have to adapt to her strength and rhythm. We also need sensitivity, alertness, and readiness to read the signs given by her. Yet, despite losing the ability to interpret the language of nature, we often tend to reject the knowledge and wisdom of older generations, ignoring the fact that sustaining the continuity in transferring intergenerational experiences is what might eventually help us survive in the state of constant instability.

My interlocutors remained unanimous in the feeling that their land and home combine exceptional beauty with powerful forces, dynamics, and unpredictability, in face of which the human life and happiness may turn out to be fragile. Living in such a unique place on Earth but also on such uncertain ground (not only metaphorically), sometimes requires exceptional courage; not so much in the act of fighting nature, since that would be inevitably doomed to fail, but in facing the disaster's aftermath. An individual, family, community must last even when wounded, and a landscape mutilated by its own strength is still a home. Yet even in the shadow of destruction the beauty of nature still remains a powerful force that sometimes helps to forget about pain and suffering.

Linda Rut, who was six at the time of the avalanche in Súðavík and the youngest saved person, has always loved the nearby mountains. Even now they are still a source of peace and quiet; looking at their beauty, she quickly forgets what they are capable of. The avalanche from which she was miraculously saved, claimed the life of her sister. It took her many years to overcome the suffering and accept the loss. Now, she is glad to talk about the last moments of joy they shared, literally a few hours before the tragedy. She remembers the smells of that evening, and the good, warm, family atmosphere of the enclave that the home was in such violent weather conditions. The house ceased to exist a few hours later, and the family was never the same again. Still, she cannot imagine another place where she could raise her daughters. It is there, in the distant fjords, surrounded by the mountains and on the edge of the ocean, that she wants to create a home for them. Nature's beauty is a kind of compensation for the losses suffered. Being aware of its potentially destructive power, she feels reconciled with it.

ON THE EDGE

There has always been a considerable degree of a kind of negotiation of living space and conditions with natural actants, in some regions clearly more intense than in others - Iceland being one of the examples. "(W)e are not simply 'surrounded' by the geologic (...) We inhabit the geologic." (Ellsworth, Kruze, 2013: 25). Wherever we live. Only now, with the human impact on climate and environment so intense "...the pace of geological change quickens, allowing human and geological time to intersect through events" with the geologic

becoming “palpable as a contemporary material force.” (Ellsworth & Kruze, 2015: 155). This usually translates into an intensified occurrence of disasters.

Moreover, thinking about human impact on climate questions the strict division into man-made and natural catastrophes. Anthropopressure is so intense that actually many of the so called “natural disasters” are largely man-made. We keep on “producing” some catastrophes and turn to landscape re-engineering to keep us safer. And we keep on triggering new ones...

Since the catastrophic events, defined as “sudden instances of monumental change” (Ellsworth & Kruze, 2015: 158), have begun to affect places traditionally recognized as “safe”, living on the edge of a disaster will soon become the whole world’s everyday reality. We should turn to societies which have had a history of complicated relations with landscape in borderline situations and learn from them. What makes Iceland an important example, is the availability of a range of strategies, logistic and emotional, of coping with geologic and weather-related instability, which we might need to implement in our lives too. Maybe sooner than we would like to admit. But what has to be remembered is that as a rich country with low population density, Iceland is privileged to have had the means for an effective natural hazards risk assessment and management system. However, we should also not forget about societies which have been dealing with an intense state of peril but, being less wealthy and more densely populated, lack the sufficient resources for good prevention and protection measures. Learning how people have been coping and managing the instability in those places is necessary to fulfill the global perspective of living on the edge of a disaster. Although this may soon become a globally shared experience, there will always be inequalities leaving some communities more exposed than others, for instance in many of so called climate “hotspots” where natural hazards are connected with dramatic economic and social situation. It is in this spirit of solidarity that we should start taking serious actions. The current situation does not allow the luxury of indifference. The whole world is becoming a danger zone and there is no way to re-engineer the landscape extensively enough to keep us all safe. We have to re-engineer our lifestyles and attitudes so that no more people nor places are traumatized.

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A Liminal Body of Performative Becoming

ABSTRACT

This paper takes its departure from the artistic research project *Body Interfaces*, which originates in working with the body as a material, applied to an understanding of its relational potentials as an interface (Madsen 2016; 2019). It will, through a focus on the affective, explore the post-structuralist adaption of the “body without organs” as a way to address liminality in performance art and to articulate responsive relations based on intensity and multiplicity (Deleuze & Guattari, 1972/2019; 1980/1987). *Body Interfaces* positions the excessive and critical body (Massumi, 2002; Manning, 2007) to engage an extended dialogue and collaboration with environments. This includes an ongoing exchange between human and non-human bodies. The research is anchored in embodied and cultural interface theory (Hookway, 2014; Munster, 2006), where *Body Interfaces* defines a multiple body with the interface as a metaphor for an exchange beyond the spatio-temporal. Through a combination of posthuman and new materialist theory employed as a methodological approach (Braidotti, 2002; Barad, 2007), and using situated and embodied encounters (Haraway, 1988), a challenge is posed to traditional scientific practices and research methods with the focus on the body as a tool in knowledge-production and meaning-making.

KEYWORDS Body without organs, performance art, liminality, affect, interface, posthumanism, new materialism, artistic research.

A BODY WITHOUT ORGANS

According to Gilles Deleuze and Felix Guattari, a body without organs (BwO) is not regarded as a concept, but a set of practices. It is a multiplicity and a singularity, with an emphasis on moving away from the physical form of the body to a field of intensities, potentials, and thresholds (Deleuze & Guattari, 1980/1987: 149–154; 1972/2019: 31–32). Like other ideas in Deleuze and Guattari’s toolbox, the meaning of the BwO changes over time, being also in a process of becoming. In *The Logic of Sense*, Deleuze calls this “a liquid principle” – with “a body (finally) without organs” (Deleuze, 1969/1990: 189). The body without organs is derived from the dramatist Antonin Artaud (1896–1948) and his conception of the Theater of Cruelty in *To Have Done with the Judgement of God* (1947); its artistic resonances are explored in Deleuze’s *Francis Bacon – The Logic of Sensation* (1981/2003). Deleuze and Guattari further evolve the BwO in their collaborative writings in *Capitalism and Schizophrenia: Anti-Oedipus* (1972/2019) and *A Thousand Plateaus* (1980/1987). A BwO here captures both the productive forces of desiring-production as well as anti-production. In *Anti-Oedipus*, Deleuze and Guattari characterize its fundamental properties as a schizo-practice, and its process of producing desire with a focus on the coupling of machines – desiring-machines, working against psychoanalysis and Oedipal-structures (1972/2019: 11–13; 68–69). In *A Thousand Plateaus*, there is a further focus on intensity, a term also extensively discussed in other writings of Deleuze, both before and after these two books. The emphasis is on how a BwO is created, its type, what inhabits it; which has experimentation and nomadism as tools for moving beyond the subjective (Deleuze & Guattari 1980/1987: 152–159).

In his guide to *Anti-Oedipus*, Ian Buchanan mentions that “it is in vain that we look to his [Artaud’s] work for an explanation of what Deleuze and Guattari have in mind” (2008: 60). I would emphasize that Artaud’s idea of the body without organs, as it was written (and performed), has crucial resonances worth mentioning in this specific context. In *A Thousand Plateaus* further comments are made directly to Artaud’s text (Deleuze & Guattari, 1980/1987: 163–164), and in *Francis Bacon – The Logic of Sensation*, a dissolving body is apparent through Bacon’s paintings, which are “[b]eyond the organism, but also at the limit of the lived body” (Deleuze, 1981/2003: 44). In line with this, Artaud wanted to create a method based on lived experience with an idea of the body defined with no separation between the body, mind and soul, but as unified in an essence of its own, working against societal norms (Fortier, 2002: 54–56). Deleuze and Guattari call this Artaudian essence an intensity, which is happening on a plane of consistency, and accordingly, it is working against strata and organization, society and the nation state as manifested in the body and its organs and their organization. It is however, according to Deleuze and Guattari, not possible to get rid of the organizing principles entirely; the strata are necessary to create a resistance, and to bounce between these entities (Deleuze & Guattari, 1980/1987: 158–163). Buchanan mentions the BwO as a site of repression (2008: 44), but it is in its slipperiness and contestation that it becomes a place for potentiality. It is a corporeally challenged body, being at this point no longer an organism, but intensities and flows, beyond representation (Massumi, 2002: 106).



Image 1. Tina Mariane Krogh Madsen, *Body Interfaces – Environments I*, Fljótstunga, Iceland (2015). Photo: Cecilia Bona. ©Tina Mariane Krogh Madsen.

According to Deleuze, Artaud, in his writing style, is destroying the dogmatic image of thought, creating “a thought without image” based on impulses, breaking down the faculties of the mind (Deleuze, 1968/1994: 146-148). This is exemplified in *To Have Done with the Judgement of God*, where Artaud is unfolding a stream of words, breaks, and ruptures. He is embracing these very machines that Deleuze and Guattari are speaking of – uttering and stuttering that “[w]hen you will have made him a body without organs, then you will have delivered him from all his automatic reactions and restored him to his true freedom” (Artaud, n.a.–a, n.p). If one listens to a recording of Artaud performing this monologue (Artaud, n.a.–b), then the forces and intensities at stake are underscoring this point, and the liminal and transgressive as well – he, as the BwO, is smooth and doesn’t conform to any rules of language or thought. As Deleuze further writes of Artaud in relation to the paintings of Francis Bacon: “[T]he body without organs is flesh and nerve; a wave flows through it and traces levels upon it; a sensation is produced when the wave encounters the forces acting on the body, an “affective athleticism,” a scream-breath. When sensation is linked to the body in this way, it ceases to be representative and becomes real” (Deleuze, 1981/2003: 45).

This artistic “scream-breath” has no stable form, but only its resonating forces and potentiality, embracing liminality in extreme bodily expressions, also found in performance art. It is important here to mention that the performance work which this paper addresses next, originates in visual art practices with the artist using their body as a medium and means of lived expression. One can

here think of Vienna Actionists in their experimentation with the transgressive physical form and body arts using the living body to its fullest limit; this is seen in the transcending and transformative actions of Gina Pane, the extending body of Carolee Schneemann, as well as the queer ritualistic body of Ron Athey. Even though Artaud is coming from a theatrical background, there is a performative expression present in his immediate outbursts and dynamic gestures, which are similar to these mentioned performance artworks. In the context of Bacon's paintings, Deleuze speaks of an excessive presence which is "the identity of an already-there and an always-delayed. Everywhere there is a presence acting directly on the nervous system, which makes representation, whether in place or at a distance, impossible" (Deleuze, 1981/2003: 51). This presence and denial of representation, which Deleuze here accounts for through Bacon's work, is applicable to liminal performance practices, where the body is explored and extended through its refusal to be of a specific nature or form, with its urge to escape its organization by means of creating transgressive states of expressions. The BwO here becomes a site of experimentation, circulated by intensities and "pain waves" (Deleuze & Guattari, 1980/1987: 149–152).

LIMINALITY IN THE BODY WITHOUT ORGANS AND IN BODY INTERFACES

According to Erin Manning, a BwO never promises anything (2007: 137), since this would stop its flows: "The skin is the incorporeal excess that provokes a memory of a reaching that arrives, in passing, to imprint skin with the resonance of its evanescence" (2007: 138). It is a body in process, using movement as a threshold, which is also evident in the *Body Interfaces* research, which started in 2015 as an artistic tool to explore the rough geology of the Icelandic landscape (Madsen, 2016; 2019; Image 1). It is not only through the reference to technology that the practices of *Body Interfaces* become a body without organs; but it is also through their notion of machines as a crucial mechanism for their exploration of the affective relations of the body beyond that of the pure surface encounters of the skin. The body becomes a tool in its capacities of relating, being a machine in the context of desire and experience, connecting itself to other machines (Deleuze & Guattari, 1972/2019: 39).

In his account of machines and organisms in the writing of Deleuze and Guattari, Daniel J. Smith focuses on the organs' – as machines – ability to produce events in combination with other machines. This outcome can never be predetermined since it is formed in the relation between its parts, creating something new, which is able to transform itself on all levels (Smith, 2017: 99–100), with "the body without organs as the becoming-machine of the organism" (Smith, 2017: 95).

I wish to enter into a discussion of liminality in this context and the micro-relations which happen in this connectivity, passage of (and exchange of) energy, (Artaudian) essence, and (Deleuzo-Guattarian and thus also Spinozan and Bergsonian) intensity. An affective body is also an abstract body, where liminality in its transitional state is defining an interface experience through the different levels of movement. This is not representative, but based on experiences, intensities, and thresholds. If we look at this through a quote from *Anti-Oedipus*: "Where do

these pure intensities come from? They come from the two preceding forces, repulsion and attraction, and from the opposition of these two forces. It must not be thought that the intensities themselves are in opposition to one another, arriving at a state of balance around a neutral state. On the contrary, they are all positive in relationship to the zero intensity that designates the full body without organs” (Deleuze & Guattari, 1972/2019: 31).

It is the field between zero-intensity and potentiality where the BwO is floating, trying its best to avoid organization. The vibrating state of repulsion and attraction mentioned here is crucial in liminal performance practices. The spatio-temporal folds into pure intensity “which brings the schizo as close as possible to matter, to a burning, living center of matter” (Deleuze & Guattari, 1972/2019: 32). I wish to regard this as an interface-threshold, where I have in previous contexts been discussing Branden Hookway’s idea of the interface in the context of *Body Interfaces* (Madsen, 2016; 2019). Hookway identifies the interface as both an interiority (passive) and exteriority (active), which evolves in an event of transformation. This characterizes, in Hookway’s words, the interface as “at the same time ‘between faces’ and ‘a facing between’” (Hookway, 2014: 9). I wish to further elaborate on this field of tension and transformation, which moves beyond fixed identities, embracing the intensities and directing the energy on these two sides of the threshold. According to Deleuze and Guattari in *A Thousand Plateaus* (1980/1987: 153): “The BwO causes intensities to pass; it produces and distributes them in a *spatium* that is itself intensive, lacking extension. It is not space, nor is it in space; it is matter that occupies space to a given degree—to the degree corresponding to the intensities produced. It is nonstratified, unformed, intense matter, the matrix of intensity, intensity = 0; but there is nothing negative about that zero, there are no negative or opposite intensities. Matter equals energy”.

In the discussion of the interface as a threshold entity, it exists in its conception of creating an energy-field (Image 2). It is not to be understood as a point of blockage or passage, which has a strictly defined boundary. Could we regard Deleuze and Guattari’s idea of zero intensity being equal to this throbbing interface threshold? I would say so. In this way, *Body Interfaces* as a practice discusses a technical capacity inscribed to the body, which is explored through agency, with the affective used as a critical tool (see also Madsen, 2016).

The *Body Interfaces* research includes at its core media theoretical reflections on – and critiques of – the traditional idea of a (human-computer) interface and is instead advocating for interfaciality as a relational practice (Madsen, 2016; 2019). An example is Anna Munster’s discussion of embodied information aesthetics, departing from the fold as a baroque understanding of matter: being at the same time both form and process, embracing continuity and difference (Munster, 2006: 7). It is through the thoughts of Gottfried Wilhelm Leibniz that the transient period of the baroque is discussed (via Deleuze) as something which is folding and including more agents and bodies, where “worlds doubling worlds within worlds” (Munster, 2006: 38), which is here applied to the concept of the interface. Munster conceptualizes through this a contemporary machinic superfolding, which digital code is responsible for due to its reproducibility and endless ability to create folds.



Image 2. Tina Mariane Krogh Madsen, *Body Interfaces – Environments III*, Videy Island, Iceland (2017). Modified photograph (Madsen 2021). ©Tina Mariane Krogh Madsen.

Digital artifacts and interfaces embrace many different entities and layers, where everything consists of other bodies as well (Munster, 2006: 34). Munster's thoughts are generally anchored in a refusal of the Cartesian dualism still present in interface discussions, and emphasize through the notion of the baroque fold, that nothing is indeed separated – not the body, the machine, or the code – and everything is in an assemblage and in a relation to each other. They affect each other (Munster, 2006). Of course, Munster is speaking from a technological point of view in relation to the use of the machine, a computer – which the human is also plugged into. Her understanding is an important point on the way to take the concept of thinking the interface as being connected, activated and transformed through the body and society (Madsen, 2016; 2019).

ENCOUNTERS

In performance art, intensity lies in the moment of encounter and transgression which is facilitated through the relational properties of the body. The exchange, the flux. In my work with the *Body Interfaces Script* (Image 3 and 4), I have applied coding syntax and vocabulary to define stages of the interface experience, as a way to notate the relations happening, even though these are difficult to grasp through words since their manifestations are affective. They are impressions of meetings as proposed potentialities and should be seen in context, which differs from the need for accuracy in programming. The *Body Interfaces Script*

is in this syntax (as departure point) connected to the realm of the machine and technology in its traditional sense; yet, through its denial of being written into a human-computer context, it is experimenting with what can be experienced and notated, and what can be called an interface.

The *Body Interfaces Script* is in itself a state of becoming, where each encounter is different and evolves through its contact with different situations, agents, and matter. This includes a dialogue with philosophy and theory. The script has in its current version been re-iterated to embrace these intensities to an even higher degree, characterizing a BwO in discussion with embodied ideas about where the interface encounter(s) are taking place (Image 4). These can never be fully captured or grasped, but stay in the encounter and flow of energies and matter.

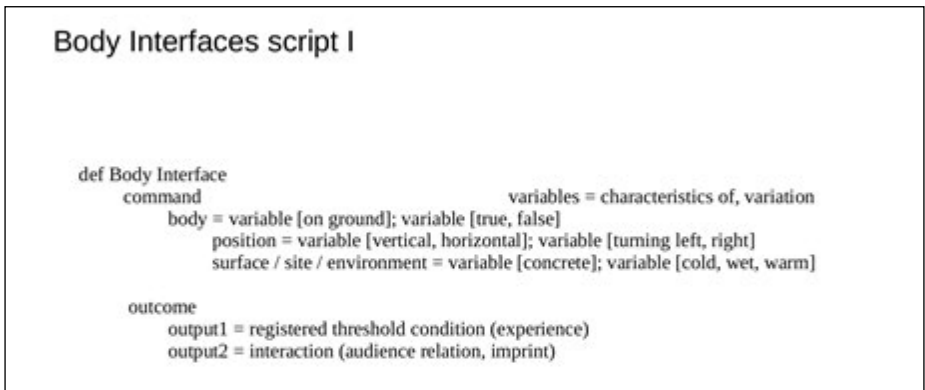


Image 3: Tina Mariane Krogh Madsen, *Body Interfaces Script I* (2016-2020).
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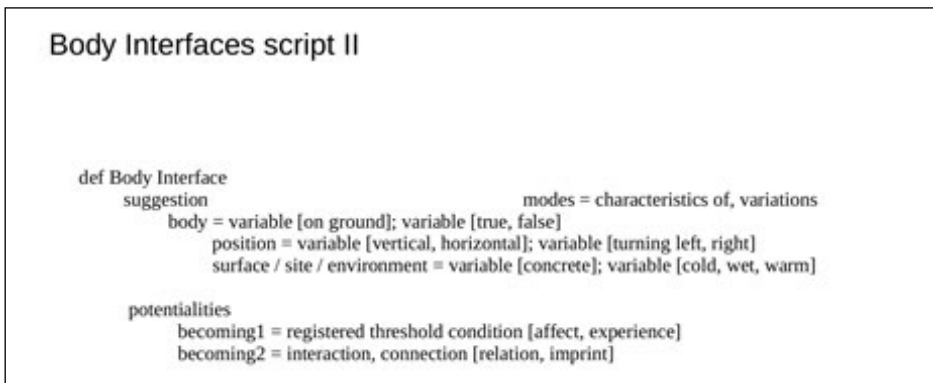


Image 4: Tina Mariane Krogh Madsen, *Body Interfaces Script II* (2016-2020).
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Through its in-between state, the interface in Body Interfaces is further methodologically connected to posthuman and new materialist ideas of a transformative and excessive body, which is intensified in new states of becoming. In the words of Rosi Braidotti, “[w]e live in permanent processes of transition, hybridization and nomadization, and these in-between states and stages defy the established modes of theoretical representation” (2002: 2). Braidotti speaks for a radical immanence, thinking through the body rather than fleeing from it, in an embodied materialism (2002: 5). The liminal and transitory body has been discussed as extending itself, where the posthuman body is a non-confirming non-binary body, which in its new materialist manifestation is ready to engage, relate and fuse with other types of bodies, human and non-human, in new machinic-assemblages and their production of desire.

Braidotti argues that Deleuze’s focus on “anti-essentialist vitalism and complexity” (immanence) is not to be regarded as “a recipe for cybernetic fantasy of escape from the body” (2002: 225), but as a way to rethink the body in relation to the technology together with which we live our lives, which is all about becoming (Braidotti, 2002: 225). John Protevi stresses that desiring-production is for Deleuze and Guattari regarded as universal and not relating to human desire per se (2009: 91). This idea of the machine, in which different entities are attached to others, embraces a discussion of how the body is connected and interlinked with the social, with desiring-production being also social-production (Deleuze & Guattari, 1972/2019: 43). Protevi emphasizes the body’s relation to and input from social systems in this context (Protevi, 2009: 96).

A SITUATED PERSPECTIVE FOR ART AND RESEARCH

Donna Haraway discusses embodied science-making and knowledge-production in the article “Situated Knowledges, The Science Question in Feminism and the Privilege of Partial Perspective,” and the ability to uncover knowledge through connectivity, creating a view point from assemblages of communities (1988: 590). Embracing Deleuzo-Guattarian lines of flight in this discussion, “[f]eminist embodiment, then, is not about fixed location in a reified body, female or otherwise, but about nodes in fields, inflections in orientations, and responsibility for difference in material-semiotic fields of meaning” (Haraway, 1988: 588).

I want to dwell a moment on the figuration of the apparatus as a mode of (explaining) the production of meaning and knowledge. Haraway speaks in this context of a “material-semiotic actor” – “bodies as objects of knowledge are material-semiotic generative nodes. Their *boundaries* materialize in social interaction” (Haraway, 1988: 595). These are thresholds, Deleuze mentions this as levels, something which the body has instead of organs (Deleuze, 1981/2003: 44–45). Karen Barad also takes this figuration as a departure point in the discussion of how different structures and spheres are connected, inside itself and from the outside (2007: 142–153), which could be compared to the bouncing entities of the interface as well. These are creating entanglements and relations on many levels.

CONCLUSION: STAYING SLIPPERY

As we have seen, a BwO needs to keep moving, bouncing off everything which could end up organizing it. In *Body Interfaces*, a BwO is necessary to capture intensity, to stay in that relational flow. It is a creative and critical BwO, whose goal is to expand and connect. Traditional human-computer interface concepts are here challenged, through a transition to a non-binary state, in a de-stratification through fluidity and an exchange between agents. These are extending beyond themselves and are part of characterizing a development of a collaborative model of excessive bodies, transgressing various fields into new modalities. The *Body Interfaces Script* defines a possible mode of interaction and presents variables for potential outcomes. The script should be seen as a version of becoming, always being re-evaluated in relation to past as well as future performance situations and regarded as an open source performance instruction, changed through its liminal existence between various bodies and agents in interaction. Due to the immediate connection and response to environments in *Body Interfaces* as lived experiences, these relations produce intensities and affects in dialogue with nature and the non-human.

As a BwO – you are moving, you are almost there – but there is no final state or form. These movements are navigating in flux, casting off any references and staying in a pure state. As we have seen through the various writings of Deleuze and Guattari – a BwO attracts and repels, connects and moves over surfaces and thresholds. What is a body but a shared trace of flows, of intensities, of desiring-production, of nomadic movements? You are entering the pre-subjective state of an affective relation to matter and the environment. It is this level of lived experience, the situatedness, which makes these interactions happen in the threshold encounter of performance art. The body becomes the relating apparatus, the interface. The transgressive does not only apply to new ways of understanding these performative bodies, but it also challenges and provokes scientific relations and the dualism inscribed in traditional interface terminology. This way of thinking underscores how knowledge is experience-based, giving voices to different entities in a dynamic exchange of collective meaning-making.

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Biotechnology under the Psychoanalytic Microscope: Border of Pleasure and Pain

ABSTRACT

This paper explores the psychoanalytic dimension of the phenomenon of the human(nonhuman) gene-editing in contemporary medical and artistic fields where the transgressing of boundary is seen as taboo. This paper argues that the uncanny feelings triggered by the gene-editing projects reflects the fundamental traumatic fissure between the “ecological symbiosis of human and nonhuman parts of the biosphere” (Morton, 2017) and our social reality. We are perturbed by gene-editing projects because the alteration of human DNA reveals the impossibility inherent in the idealization of the human as a closed, autonomous biosystem. Biotechnology, whilst exploring liminality in the hope of prolonging life, has become what Jacques Lacan calls the “*sinthome*” that binds the imaginary, the symbolic, and the real. It allows us to experience the sensation of both pain and pleasure in the form of *jouissance*. In this paper, biophysicist HE Jiankui’s gene-editing projects and the artworks by Anna Dumitriu will be separately addressed in order to illustrate the arguments above.

KEYWORDS Bioart, Biotechnology, Sinthome, Jouissance.

INTRODUCTION

In November 2018, the Chinese biophysicist Jiankui HE claimed that two babies, Lulu and Nana, who were genetically-modified by his research team with the CRISPR (clustered regularly interspaced short palindromic repeats) technique in order to endow them with immunity to the human immunodeficiency virus (HIV), were born. It was the first time that scientist claimed to have conducted gene-editing on human embryo, triggering wide-spread shock and condemnation around the world. Yet, unlike HE who shares an optimistic view on the impact of biotechnology, the bioartists, in their attempt to capture the new body experience in a posthuman world, express a rather mixed feeling towards this new technology. On the one hand, experimenting on living organisms, living tissues, and bacteria, bioart explores the intersection between art and the biosciences, exhibiting the desire to embrace new dimensions opened up by technology. The artists are as excited as the scientists about the juxtaposition of materiality of species and matters (such as the glowing rabbit Alba developed by artist Eduardo Kac and geneticist Louis-Marie Houdebine).

On the other hand, bioart, targeting at “the heart of our fears” and meant to “disturb” (Hauser, 2003), walks on the fine line between pleasure and pain, life and death, thus framing a cautionary tale on the methods and practices of biotechnology and bio-medicine. For instance, “The Romantic Disease Dress” (2014) by bioartist Anna Dumitriu, impregnated with the extracted DNA of killed *Mycobacterium tuberculosis*, plays with the “human fears of contamination or contagion and the idea that even though these pathogenic microbes are invisible they may still be present in everyday life” (Dumitriu et al., 2017). In a word, bioart, by triggering both discomfort and excitement, disturbs the ontological border between the human and the non-human, creating an unsafe space for the audience to *live through* biotechnology, forcing us to confront the bio-modified world that is both alluring and daunting.

In this paper I will use the Lacanian “microscope” to magnify biotechnology, particularly human(nonhuman) gene-editing in contemporary medical and artistic fields where the transgressing of boundary is seen as a taboo. I will present how the gene-editing project by scientist He and the bioart works by Anna Dumitriu bespeak the quest for the aesthetics of liminality. Specifically, I will focus on the following questions: Why do bioart and biotechnological products often trigger the mixed feeling of excitement and repulsion? How does the Lacanian concepts such as “sinthome” and “jouissance” help us understand our quest for this liminality? How does bioart grapple with our complex relation to the non-human other?

If Donna Haraway radicalizes the boundary between organisms and machines, arguing for “pleasure in the confusion of boundaries” (Haraway, 2016), then Lacan would argue that it is precisely through this dissolution of boundaries that we encounter the inherent limitation of our symbolic world, the glamorous technocapitalist social reality we live in. On the one hand, bioart exhibits our desire to explore the border “between torment and death, life and joy for one’s self, for our nonhuman other, and for the ecosphere in general” (Zaretsky et al., 2017). On the other hand, making tangible the “irreducible gap between the Real and modes of its symbolization” (Zizek, 2008), bioart, in its exploration of the aesthetic

of liminality, reveals the impossibility inherent in the idealization of the human as a closed, autonomous system.

SINTHOME, CRISPR, AND BIO-JOUISSANCE

In this part I will demonstrate that the CRISPR-Cas9 technique exemplifies how biotechnology has become the modern-day *sinthome* through which scientists and artists destabilize the social fantasy where human beings are perceived as closed, stable, autonomous systems. Biotechnology initiates the experience of Bio-*jouissance*. The altered DNA, and subsequently, the inter-species proteins/organs/ organisms, are the *objet petit a*, embodying *jouissance* which attracts and repels at the same time.

Sinthome, an old way of spelling for symptom, was a term used by Lacan in *Seminar XXIII* to designate the signifier which sustains the subject by knotting together the three realms (the imaginary, the symbolic and the real), maintaining the “continuity” of the four (Lacan, 2018). Lacan adopts the image of the Borromean knot to illustrate how the limitation of language paradoxically manifests the beyond-of-language. The knot “ex-sists” because on the one hand, it emphasizes the real that resists our grasp. “Insisting outside the imaginary and the symbolic, the real butts into, plays into, something that is the order of limitation” (Lacan, 2018). Furthermore, the “false hole” (of the knot bespeaks the failure of language, a sign for the Other (the symbolic web) as forever bared. Through the “false hole” (Lacan, 2018) in the symbolic the analyst thus sees the symptom of the patient.

The symptom is that which harbors the “real kernel of enjoyment,” persisting as a “surplus”; it “returns through all attempts to domesticate it, to gentrify it . . . to dissolve it by means of explication” (Zizek, 2008). The *sinthome* as “a particular, ‘pathological’, signifying formation . . . an inert stain resisting communication and interpretation, a stain which cannot be included in the circuit of discourse, of social bond network, but is at the same time a positive condition of it” (Zizek, 2008). In other words, the *sinthome*, via negation, guarantees the access to the other satisfaction locating at the level of the unconscious (Lacan, 1998). This “other satisfaction” achieved at the missed encounter, at where language fails to capture the real, in its essence, depends on *jouissance*, an intense enjoyment mixed with pain. This pain is generated because *jouissance*, due to its structural lack, is essentially phallic (Ø). The subject (ØX) succeeds in the failure of realizing his desire to be the “sole One”—the primary irreplaceable signifier.

With the above introduction to *sinthome* and *jouissance*, I can proceed to use the example of CRISPR technique to illustrate the nature of the forbidden in the fields of science. CRISPR-Cas9, invented by scientists Jennifer Doudna and Emmanuelle Charpentier, is a gene editing technique famous for its simplicity, precision, and high-efficiency. The essential feature of CRISPR-Cas9 is that it imitates bacteria’s immune system which allows the host to replicate the genomes of the enemy, namely, the invading bacteriophages, incorporating viral genomes into the host’s body. The next time when the same kind of bacteriophages invades the bacteria, the latter will produce the counter-RNA that aims at destroying the invader’s replicating system. The critical components in the CRISPR-Cas9

technique are: Cas9—the DNA cutting protein, and the guide RNA molecule. The Cas9 protein locates the genome of the bacteriophages and the guide RNA can unwind part of the double helix, allowing the Cas9 protein to subsequently break the targeted DNA. In the natural environment, once being broken, the invader's DNA will suffer from mutation or mismatching, resulting in the termination of its replication within the bacteria host. The CRISPR-Cas9 technique therefore allows scientists to locate, and subsequently to knock out or change a specific sequence of genes. Based on this technique, the research team of He Jiankui mutated the genes of human embryos, producing a new species (Lulu and Nana) that is immune to HIV.

The key question to ask is: Why does the new species Lulu and Nana provoke such anxiety among us? Psychoanalysis tells us that the affect of this bio-object testifies its function as the Lacanian *objet petit a*, introduced via the “radical vacillation” (Lacan, 1978) of the “Human” subject. It embodies the *jouissance* that attracts and repels at the same time. The birth of Lulu and Nana is a result of He Jiankui's attempt to throw the cotton-reel in the Freudian game of *fort* and *da*. The new species breaks with the symbolic realm nailed down by the master signifier—“Human.” They are a small part of the “Human” subject “that detaches itself from him while still remaining his” (Lacan, 1978). He Jiankui's experiment manifests the repetition of the *Spaltung* in the subject, targeting at what is “not there, *qua* represented” (1978). This “not there” is the Lacanian real that resists any form of symbolization.

The production of Lulu and Nana through the CRISPR-Cas9 technique is the “*Repräsentanz* of the *Vorstellung*” (Lacan, 1978), a moment of *tuché* as the encounter with the symbiotic real. The new born species as the bio-object *petit a* thus marks the fundamental limitation in human's capacity to create the “One”—the primary irreplaceable signifier—the unique “Human” category that can fill up the hole in our symbolic realm. Once the scientists create HIV-resistant baby, there opens the gap where we see our insatiable desire for further perfection: Alzheimer-resistant, diabetes-resistant, corona-resistant... The list can go on endlessly. The gene editing project on human embryos thus reveals the “structural effect” (Žižek, 1998) of the primal fall of the subject, the split that initiates the advent of agency.

He Jiankui's gene editing project is treated as a taboo because the birth of Lulu and Nana disrupts the fantasy constructed by society that we are an autonomous supreme species, reminding us of the particles and molecules that compose every organism on our planet, reducing humans to a tiny range on the infinite spectrum in the biosphere of the universe. Despite the fact that we have not seen the images (photos) of Lulu and Nana, the news report about these two girls opens a fissure in our social reality, forcing upon us the knowledge that the DNA in our embryos replicates just like the bacteria or viruses that we are now desperately trying to eradicate with antiseptic spray. In a word, the bio-object manifests the return of the real.

The alteration of DNA and subsequently, of the protein and organs of human species, brings forth the prioritization of matter in the course of human history, introducing a paradoxical situation where the humans are displaced into “an

imaginary bifurcation in which the subject objectifies itself as a part of a larger material network and simultaneously occupies the site of the all-seeing subject” (Roof, 2018). Biotechnology as the *sinthome* not only demonstrates the first lack—the self-induced mutilation that marks the advent of the subject, but also stages the second lack—“the real, earlier lack, to be situated at the advent of the living being” (Lacan, 1978).

The CRISPR technique’s capacity to stir up the invisible real can also be reflected in Anna Dumitriu’s art. Created by Dumitriu and her colleagues in 2017, *Make Do and Mend*¹ is an installation referencing the “75th anniversary of the first use of penicillin in a human patient in 1941... [taking] the form of an altered antique wartime dress” (Dumitriu, 2017). The suit has the British Board of Trade’s utility logo CC41 (Controlled Commodity, 1941), symbolizing the government’s “austerity regulations”² on the use of material goods.

Dumitriu mends the dress with the silk onto which she grew *E. coli* bacteria, the antibiotic-resistant genes of which had been knocked out and replaced by a new fragment of DNA encoding the phrase “Make do and Mend” (converted via ASCII code). This alteration of the bacteria genomes was achieved by using the CRISPR technique. The artwork is in line with the series *The Chemistry of Biology: The Alchemy of DNA* which echoes the alchemical desires to transform matter into new forms, to “create panaceas to cure any disease, or to find the secret of immortality” (Dumitriu, 2017). The combination of historical narratives and gene editing technology reveals the artist’s attempt to “deconstruct what DNA is and what it means to us” (Dumitriu, 2017) in a world where the discourse of matter seems to dominate, and technology seeks to re-mystify life (Zaretsky, 2017).

How does this “deconstruction” of DNA demonstrate the biotechno-*sinthome*? Lacan in *Seminar XX* states that the signifier is the cause of *jouissance*. “Without the signifier, how could we even approach that part of the body? Without the signifier, how could we center that something that is the material cause of *jouissance*?” (Lacan, 1998). What Lacan implies is that the real is always accessed via the symbolic. *Make do and Mend* showcases the biotechno-*sinthome* in that it manifests what Lacan calls the process of “corporizing” via the symbolic (Lacan, 1998). The anxiety stirred inside the viewer not only reflects how the artwork plays with our fear for contagion or death but also exposes the artist’s desire to capture the *jouissance* of the Other’s body. There is an impasse in *jouissance* constituted by the fissures in the symbolic, in this case, the inherent lack of the signifier—“Human.” This category has always been insufficient to designate our species since human body has never been a closed, autonomous system.

1 For more information, see Dumitriu’s article and website: <https://annadumitriu.co.uk/portfolio/make-do-and-mend/>

2 The website of the History of Science Museum at Oxford offers an introduction to this title: “*Make Do and Mend* was originally a leaflet published by the British Ministry of Information in 1943 during World War II. It advised readers on how to be fashionable under clothes rationing. It contained economical patterns and advice on upcycling old clothes. The leaflet became a vital handbook for housewives. Specifically, the leaflet gave readers hints on creating attractive decorative patches to mend holes in worn-out garments.” For more information, visit: <https://www.mhs.ox.ac.uk/bioart/make-do-and-mend/>



Image 1. *Make Do and Mend*
(Dumitriu, 2017). © Anna Dumitriou.



Image 2. *Make Do and Mend*
(Dumitriu, 2017) © Anna Dumitriou.

For example, the harmless strains of *E. coli*a bacteria have been living inside us for millions of years, producing vitamin K2 and helping us balance the micro-environment in our intestines³. This symbiotic state can never be fully captured by the category of either “human” or “non-human.” What’s more, the alteration of DNA as magnified by the mending piece on the woman suit serves as the Kafkaesque wound, the “embodiment of vitality... of the life-substance in its most radical dimension of meaningless enjoyment” (Zizek, 2008). It protrudes as what cannot be subsumed into the symbolic, as the “little piece of real” (Zizek, 2008). The encoded phrase “Make Do and Mend” inserted into the bacteria gene pulls our symbolic web towards the symbiotic real. The fact that CRISPR technique is trendy as well as controversial demonstrates how the blurring of boundaries between species, either in art or in scientific project, has been a social taboo that harbors the kernel of the real, the navel of our unconscious, the painful eruption of the impossible *jouissance*. Our mixed feeling of fascination and repulsion towards genetically modified organisms, therefore, is a testimony to the residue of the real, to what is “in DNA more than DNA.” In combination the dress and mending piece of the genetically modified bacteria confront our category-fixed political imaginary of the “Human”, bespeak, via pure negation, the radical vitality in the symbiotic real, signaling our move closer to the cyborg “ex-sistence”⁴.

CONCLUSION

Bioartists deploy biotechnology to target at the *insecurity* in our existence, to tear apart the illusion of a constant social reality and pierce the symbolic web quilted by the master signifier—“Human.” In *What is Life?* Schrödinger argues that the barrier between subject and object does not exist, that “the world extended in space and time is but our representation (*Vorstellung*)” (Schrödinger, 1992). What Lacan reveals in his seminars is that not only are space and time being only our representation, but our very existence itself bespeaks the non-existence of the real. Bioart, walking on the border of pleasure and pain, functions as the representation of the biotechno-*sinthome*. It frames us in such a way that we experience the immediacy of our fear for castration, our compulsion to repeat, and our drive towards the inanimate, towards what Schrödinger calls “a dead, inert lump of matter.” In the end, we strive towards “the ultimate disorder state of thermodynamic equilibrium” (Schrödinger, 1992). However, despite this death drive, bioart also insists that we’d better enjoy our *sinthome* rather than using some fragile fantasy to cover the “hole” in our ex-sistence. The mixed affect of attraction and repulsion, of pleasure and pain, exemplifies what Lacan calls the survival of the “knowledge of *jouissance* . . . on the fringes of civilization,” on its “discontents” (Lacan, 2011).

3 See Dumitriu’s exhibition *Super Organisms*: <https://annadumitriu.co.uk/portfolio/super-organism-series/>

4 In “Fantastic Voyage and Other Scales of Wonder” Patricia Olynyk wrote this phrase “cyborg existence”. I combined it with Lacan’s play of “exi-stence” in his Seminar on *Sinthome* to highlight the inherent lack within our existence.

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Skin Bible: The Word Made Flesh

ABSTRACT

Skin Bible: The Word Made Flesh is a collaborative project by Canadian trans-medial/performance artist [M] Dudeck and Australian bio-artist Niki Sperou. The project centres around the transgressive artifact, *Skin Bible*, bound in a laboratory-produced 'skin like' marine algal biopolymer matrix seeded with Dudeck's cells. *Skin Bible* will include illuminated images from Dudeck's RELIGIONVIR.US space opera grafted onto biopolymer-parchment; a transdisciplinary glossary; and other collaborative input. The artefact speaks within a chapel of performance work and installation. *Skin Bible* builds upon the longstanding investigation of both artists; Dudeck's twelve year fictional queer religion and mythological space opera, disseminated in over twenty-five countries, titled RELIGIONVIR.US, and Niki Sperou's twenty year reflection upon the fusion of contemporary biotechnology with Ancient Greek myth and philosophy, science as ritualistic process, and her production of fleshy forms and Chimerical human-plant hybrids. Deviating from the moral limits of a Judeo-Christian value system, their collaborative work extends upon religious myth making and speculative futures.

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KEYWORDS Bio-art, performance, religion & myth, queer art, post-human, anthropocene.

*“In the beginning was the Word,
and the Word was with God, and the Word was God.*

*He was with God in the beginning.
Through him all things were made;
without him nothing was made that has been made.
The Word became flesh and made his dwelling among us.”*

(The Gospel of John 1:1 – 1:15)

INVOCATION

Skin is a porous membrane, a flexible boundary between inner and outer worlds. Skin wraps the body and defines it, and “sets it apart” from the world. The Hebrew word for Holy, קדוש (Kadosh), as well as the Arabic word for sanctified سِدْقَمَلَا (Muqqadas) share the same Semitic root – *q-d-s* – which translates into English as ‘set apart’. This ancient phonetic stem denotes *the sacred* as an act, or domain of *separateness* -- implying that holiness is a process of *demarcation* that divides the sacred from the profane. Holiness, therefore, is a kind of *skin*.

The Hebrew Mishnah describes this terrain spatially; holiness is presented as a host of concentric circles, emanating outward from the nucleus of the Temple in Jerusalem, and protocols are in place to police entry and exit of each concentric perimeter. Within this framework, if some-*thing* is to be transferred from lesser to higher levels, it must do so via ritual *check-points*, where qualified agents (priests) inspect the incoming material then accept or deny entry. If some-*thing* is deemed unclean but still welcome, it is the priests that are uniquely qualified to purify it so that it may be permitted entry into the higher spheres. Thus, the act of *consecration*, of making something holy or sacred, involves first and foremost the act of removal or separation, followed by processes of purification followed then by formal rites of sanctification. To make something holy means to *skin it*.

Upon the backdrop of the polytheistic Ancient Near East, the first monotheistic religion now referred to as Judaism, emerged as the flagship of a number of critical historical innovations. Chief among these was the advent of a uniformly “text-based” religion, that emphasized literacy as the means with which to commune with the divine as a singular, abstract, imageless God that could only be accessed -- and explored -- through *syntax*. Thus, in contrast to its ancestral cosmogonies, the origin myth of Judaism ascribes the creation of the universe through the medium of language: “In the beginning was the Word”. Following many centuries of development and revision, this concept mutated to align with the arrival of Jesus of Nazareth, a prophet believed by many as God incarnate, briefly condensed into matter and form – thus we have the rise of the concept of *The Word (God) made Flesh* (in Christ.)

Media theorist Douglas Rushkoff presents Judaism as a theological “technology” that emerged within a context of significant historical change. Judaism materialized in the midst of the Axial Age – which saw roaming nomadic peoples transform into agrarian farm-based communities. This transition required contracts – agreements condensed into text, inscribed upon

parchment and papyrus and made ‘legal’ through authoritative transcription. This device was incorporated into Judaism’s fundamental code of a *Covenant*, a legal contract based upon mutual reciprocity between the singular God and his people. After the fall of the Temple in Jerusalem, and the onset of the Babylonian exile, in fear of losing Jewish congregants to alluring other gods, the “scriptures” that were previously performed orally were condensed into texts that literate adherents could read ritually in divided sections (referred to as Parshahs). This process enacted what Rushkoff refers to as a proto-deconstructive instinct: one that emphasises a close and critical engagement with text, that provided an alternative to the cultic immersion one would experience through the oral performativity of live storytelling and the seduction and artifice of ritual. As a media theorist trying to make sense of the internet and the changes its global implementation could ignite, Rushkoff was looking for historical precedents where major new media was introduced with the potential to drastically shift historical paradigms: “Judaism is a religion dedicated to media literacy... Like the early internet, which was too slow to render pictures, Judaism is a text-only religion. As a result, also like the early internet, Jewish law and legend is as easy to write as it is to read—the very definition of transparency. It is a two-way set of texts, continually annotated by its readers. The annotations judged most successful by the greater community become part of the religion’s core code – just as in the shareware software development community. Images are forbidden, because they can so easily become sacred in their own right...” (Rushkoff 2003, p.xiii).

This ancient holy war between text and image perhaps found some refuge in the Medieval practise of the Illuminated Manuscript, wherein the words of the holy scriptures are inscribed and illuminated onto pieces of parchment – *the word made flesh*. Integrating Dudeck’s religious premise, and Sperou’s recent research toward anthropodermic bibliopegy (the tradition of binding books in human skin) combined with her longstanding investigation into *agalmata* and *anathēmata* (ancient Greek reliquaries and votive objects) and various tissue engineering techniques, the creation of an illuminated Skin Bible merges text, image and flesh into a new hybrid of biotechnological excavations, that asks questions as to the nature of “the sacred” in the information age.

GENESIS

In 2013, the first major Bioart event in Canada took place in Winnipeg Manitoba, titled *The ToXicity Project*, curated by Melentie Pandilovsky and Jennifer Willet, jointly presented through PLUG IN ICA and Videpool. Born and raised in Winnipeg, Dudeck had returned home to witness this exhibition and subsequently enrolled in a bioart workshop titled *Zones of Inhibition*, hosted by Niki Sperou, and it was here that their long-term friendship and collaboration began. The workshop, with the inclusive aim to dissolve boundaries by demystifying biotechnology, was an extension of Sperou’s participation in the project, which included her installation *Trust* (2013). *Trust* examined the myth of a panacea, antibiotic exacerbated bacterial resistance, the trust placed in the pharmaceutical industry and the

concept of the common good and capitalist goods. She also delivered a lecture at the ToXicity project, *Toxic Life and Engineered Death* Symposium, Video Pool Media Arts Centre, which expanded upon all of these themes.

Sperou spoke about the importance of empirical experience with regard to laboratory work; observing and hacking the inherent strategies of live media. She described a ritualized process of holding her breath, in anticipation of the actions non-human agents would perform, while speculating if they would respond as expected to her manipulations, or not. Early in her practice, Sperou noted one observer ironically denouncing ‘wet’ media in an art context as ‘meat puppets’. As an artist interested in socially engaged practice, who performed with Greek and Indonesian shadow puppets made of tanned skins in the early 2000’s, this description resonated with her. Sperou’s enduring fascination with performative action within the culture of biotechnology is in line with the recent definition of microscopic live media in action as *microperformativity*. According to Jens Hauser: “*The neologism microperformativity denotes a concept that cross-fertilizes aesthetics, media and performance theory, as well as science and technology studies, to contextualise the recent attention paid to other-than-human agencies, biological and technical ones alike*” (Hauser, 2020).

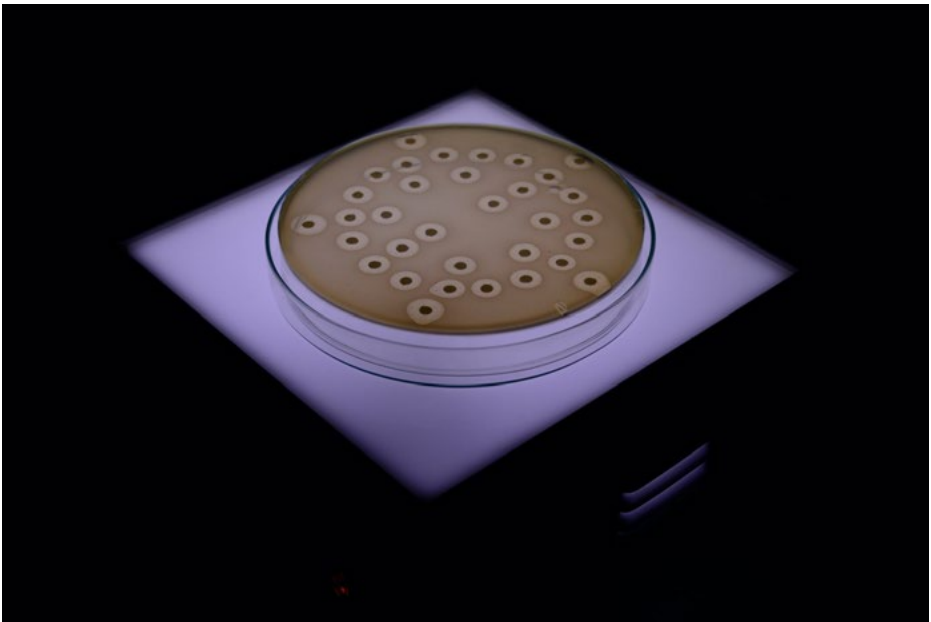


Image1. Niki Sperou, *Trust* (2013) antibiotic, paper, E.coli bacteria, agar media, glass Petri dish, (antibiotic resistance via Zones of Inhibition). © Courtesy of the authors.

Sperou’s palette is skin, blood, fat, flesh and chlorophyll. Extending upon the themes of myth, metaphor and corporeality is her notion of *Matrix: The body as scaffold for the methodologies and metaphors of science* (Sperou,

2016), which combines science, myth and ritual as a way to re-frame age old questions that interpret worlds. Sperou sculpts with the inherent strategies of living media together with biotechnological techniques toward ethical, social and aesthetic investigations. Technology and ritual constitute rational behaviours and inform how we submit to power. As an artist of Greek heritage living in Adelaide Australia, Sperou has two decades of interest in the relationship between ancient Greek myth, ritual and contemporary biotechnology, most notably present in her ongoing research into the Chimera, which she defines as the fanciful artefact defined by contemporary biotechnology and ancient Greek culture. The term Chimera pertains to: "...the hybrid monster, the transgenic organism of biotechnology and the illusion. Chimera is etymologically linked to khemia (alchemy) – the magic art of transmutation or the fusion of disparate things to make new" (Sperou, 2008: 91-92).

In a more recent talk for ANAT Spectra Symposium 2018, Sperou expanded upon these themes as follows: "Bio-political and bio-ethical issues associated with biotechnology have been the central premise of my work since 2001. These interests emerged from an early interest in ethnographic and culturally diverse collaborations; themes involving socially engaged art. The overarching question of what it means to be human is of enduring interest. However, the non-anthropocentric view of sociologist Hannah Landecker [in which she] suggests that, "What is it to be biological[?]", is perhaps a better question. Hence the utilization of biological media from a bio-political perspective can be socially engaged practice extended beyond the limits of human...Being open to multiple viewpoints and agencies is intrinsic to a sympoietic system...Transdisciplinary practice, such as science and art collaboration, builds common ground to subvert boundaries which influence policy...Subjective viewpoints create room for re-negotiation of outmoded ideologies toward those pertinent today: What is the social dialogue now? Who and what are we now? What is the historical perspective of a medium? What are its applications or actions? What are the alternative viewpoints? How can we subvert the powers who wrote the history and how do we look forward? How do we respond to crisis and how can we be more mindful of our actions? How do we balance aesthetics and ethics?"

A longstanding approach to my work has been to fuse contemporary biotechnologies and Ancient Greek paradigms; innovations with traditions. In Greek culture it is said that when trying to define the undefinable you are chasing chimeras. Chimeras here are cross cultural and cross disciplinary entanglements and futures that are hard to predict. When considering changes in fields, I find tradition provides fixed paradigms for past attitudes against which speculative futures can be teased out.

Many artists working in the genre of bio-art, including myself, aim to decolonize culture...to be inclusive, demystified, feminist and subversive toward privilege of fully human over non-human. Consider also the politics of Terra Nullius (no body's land), bio/techno hybridity, the hierarchies imposed on life and boundaries between disciplines" (Sperou, 2018).



Image 2. [M]Dudeck, *Liber Meta 2:0*, digital performance documentation dimensions variable, performed as part of LAPSODY Festival of Live Art, 2018. Photographs by Ray Langenbach. © Courtesy of the authors.

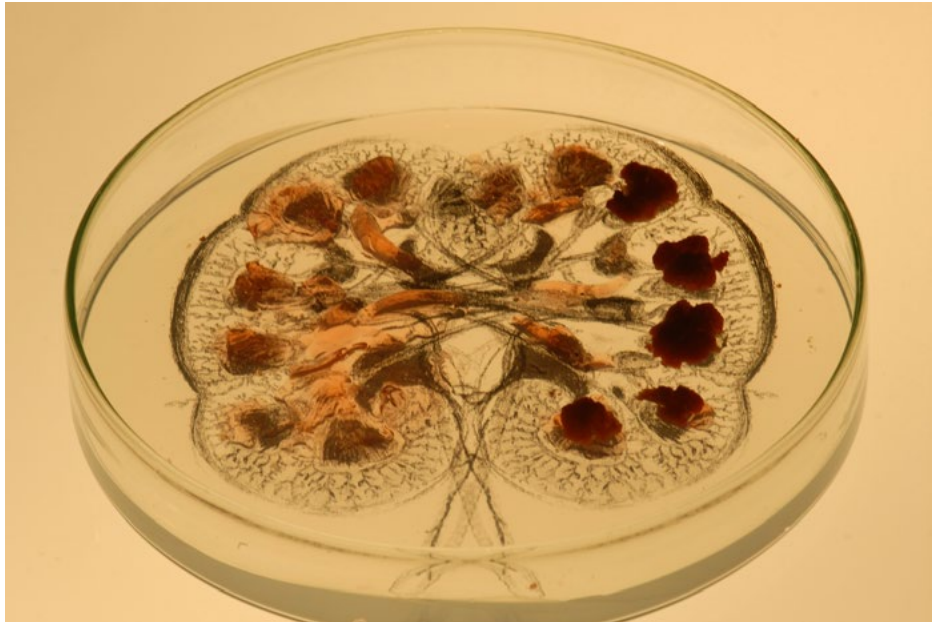


Image 3. Niki Sperou, *Man A Plant Series (2006)* (installation detail), Glass Petri dish, plant tissue culture, agar medium, drawing, produced via aseptic technique, on light box plinth with wall mounted giclée prints. © Courtesy of the authors.

Various notions of performative action link the work of Dudeck and Sperou. Dudeck had spent the past thirteen years inventing a religion as art, which they call RELIGIONVIR.US. RELIGIONVIR.US is an ongoing multimedia artwork and social sculpture that weaves together a host of media to produce an ongoing, queer religious mythology and space opera. Tactics have included: ritual performance, liturgical techno-sermons, museological installations of invented artifacts the invention of fictional languages, or holy writ (called *In'Sekht*), the composition of sacred electronica and the construction of a web-based digital temple among many others. RELIGIONVIR.US is premised upon the notion that, at its core, a religion is a form of multimedia production, capable of generating worldviews, inspiring beliefs and engineering cultures. Within Dudeck's transmedial mythology, universes are seeded by genetic engineer gods called Archons who build worlds and populate them in successive artistic research experiments into the nature of consciousness. In short, the gods of [M]'s mythos are *bioartists*.

Dudeck creates a fictional religion as a kind of carpentry of the sort that Ian Bogost describes as a philosophical practice of "making things that explain how things make their world" (Bogost, 2012: 93). Their work aims to expose and perform the inherent constructivity or *artifice* involved in creating a religion, and as such within the narrative of the mythos, they refer to their invented religion as *Artifism*. As a scholar of religion and as a queer theologian, Dudeck refers to their project as RELIGIONVIR.US - intentionally presenting the construct of "religion" as an infective agent capable of multiplying within the living cells of its host. They examine the means through which religion infects and spreads virally – and excavates "the religious experience" through the hacking of religious paradigms using art to produce what they refer to as "religious prosthetics".

Dudeck and Sperou, despite significant differences in the outputs of their research, discovered interests and aligned approaches to making and thinking about art, climaxing in the shared view of biotechnology as a performative ritualistic practice rooted in myth (Dudeck & Sperou, 2020).

POLYMER PARCHMENT

Following extended dialogue exploring Dudeck and Sperou's shared interests over several years, while in the final stages of their practise-based PhD, Dudeck approached Sperou with a seed that had long been germinating in their RELIGIONVIR.US garden. It was presented to Sperou via messenger app as a form of artistic and spiritual confession, which also bore within it a veiled invitation: "I have this dream of making my bible out of a leather made from my own skin" (Dudeck, n.d.).

Dudeck had begun composing their own illuminated bible in a series of durational performances (*Liber Meta 1:0* (2017), *Liber Meta 2:0* (2018), *The Neon Bible* (2018)) wherein the artist sat inside of a constructed Chapel installation and in the manner of a medieval monk or scribe, illuminating and inscribing their bible on parchment and papyrus over countless hours over multiple days. As a performance artist whose practise was rooted in live presence, they began to

conceive of producing a bible that was made of their own flesh – their *words made flesh*. Dudeck developed a curiosity towards BioArt devices to integrate the pages of their scriptures with cells from their own body, and began to collaborate with Sperou to produce a skin that literally and metaphorically grew out of their shared process.

Sperou is the artist-in-residence at the *Centre for Marine Bioproducts Development* (CMBD) at Flinders University in Adelaide, Australia. At the advent of the Skin Bible collaboration, she was appointed as the 2020 Australian Network for Art and Technology (ANAT) Synapse residency recipient, to explore biodegradable marine algal polymers and plastics at CMBD. Her motivation for the eco-conscious endeavour expands upon Promethian and Capitalocene narratives. Of the Green Plastics - Blue Ocean project she says: “artists are essential to how we imagine and shape our future... the probing of technological problems, responsibility, potential futures and the rethinking of plastics evokes hope.” (Sperou, 2021: p39) As well as other applications, Sperou and CMBD investigated the use of marine algal polymers for biomedical implementation including organ rejuvenation scaffolds, wound healing films and 3D bioprinting. When receiving Dudeck’s confession/invitation to engineer a bible, Sperou was enthusiastic and it quickly transformed into a collaboration.

Dudeck and Sperou began to explore the possibility of producing a *polymer parchment* that could merge Dudeck’s DNA with that of the seaweed, which Sperou was at the time exploring and researching. The merging of Dudeck’s skin cells with those of plants – arguably the oldest plant like organism (seaweed) on the planet – aligned with Dudeck’s instinct to produce parchment made of their own body, and spoke to a larger merging of animal and plant that was at the core of Dudeck’s psychedelic religion. This fit with Sperou’s human plant *Chimeras* (initiated 2001) and closely with her series *Man A Plant* (2006) incorporating plant stem cell tissue culture with human anatomical drawing as a metaphor for emerging human stem cell rejuvenation therapies.

Over long-distance conversations, a strategy was discussed between Dudeck and Sperou. Preliminary research and development were carried out in preparation, over several months, for the next stage of development towards the realisation of Dudeck’s vision of a religious scroll. A marine algal polymer matrix ‘leather’ was developed by Sperou and biotechnologist Peng Su at the Centre for Marine Bioproducts Development (CMBD) at Flinders University, South Australia as an extension of Sperou’s Australian Network for Art and Technology (ANAT) residency. In 2020, Sperou collaborated with biotechnologist Peng Su at CMBD toward research and development of biodegradable marine algal bio-plastics and polymers as greener alternatives to fossil fuel plastics. To produce the leather Sperou and Su adapted an alkaline algininate extraction method for beach cast South Australian seaweed, *Durvillaea potatorum*. Sperou’s work with biodegradable marine algal biopolymers as greener alternatives to petroleum plastics and for biomedical applications evolved to include the collaborative Skin Bible.



Image 4. [M]Dudeck & Niki Sperou, Skin Bible: The Word Made Flesh, digital video still, (2020). © Courtesy of the authors.



Image 5. Niki Sperou, Marine Algal Polymer Matrix with CMBD. Digital image, dimensions variable, (2020). © Courtesy of the authors.

Dudeck's dream of a bible seeded with their DNA resulted in an opportunity for Dudeck to undertake a future residency at CMBD to work collaboratively with Sperou to produce a 'skin like scroll' which they collaboratively titled *Skin Bible*. *Skin Bible* fits within a broader context of sustainable/green marine algal biopolymer films and medical materials and artworks which incorporate a biopolymer matrix for the seeding of cells. The production of a new form of hybrid, polymer parchment, is genuinely post-human and homo-vegetal, another re-occurring theme within the myth-germs of Dudeck's space opera.

Whilst Dudeck and Sperou intended to begin the process of fabricating the pages of the *Skin Bible* at CMBD in Australia in early 2020, Dudeck's ability to travel to Australia for the production of the *Skin Bible* was restricted due to the global COVID19 pandemic. In November 2020, Dudeck and Sperou participated in the interdisciplinary conference *Taboo-Transgression-Transcendence in Art & Science* (TTT 2020), hosted by the University of Applied Arts Vienna. At TTT, as part of the adapted online conference, they presented research in process as the video-essay *Skin Bible: The Word Made Flesh*.

INDEX

Skin Bible: The Word Made Flesh was placed within the category of Index at the TTT 2020 Conference. Index is a semeiotic device that shows evidence of the concept or object without the object itself being represented. According to the pragma-semeiotics of Charles Sanders Peirce, Index proposes "a representation, which refers to its object not so much because of any similarity or analogy with it, (...) as because it is in dynamical connection both with the individual object, and with the senses or memory of the person for whom it serves as a sign"... "An index doesn't resemble the object or concept being represented. Instead it resembles something that implies the object or concept".

Submitted to the conference was a short video, an artwork in itself; a representation that gives context to the *Skin Bible* project. Avatars of Dudeck and Sperou, framed within a sci-fi extra-terrestrial context, were signifiers of a long-distance collaboration; distanced and delayed due to the COVID19 pandemic. Long-distance here has further connotations: Dudeck is a Canadian living and working between Italy and Scotland, and Sperou comes from Greek ancestry having been born and raised in Australia.

In addition to the distance that lives between the artist's ancestral and geopolitical locations, and the geographic/sociopolitical distance between Europe and Australia, the project animates the distance – and proximity -- between Dudeck and Sperou's surrogate disciplines, Religion and Science, aligned through subversive interventions carried out under the broad auspices of Art. Negotiation with various authorities extended this project beyond accepting artistic and philosophical frameworks. Framing the *Skin Bible* required transcendence through delicate terrain in order for it to pass.



Image 6. Niki Sperou, Seaweed Biopolymer Skin, digital image, dimensions variable, (2020).
© Courtesy of the authors.



Image 7. Niki Sperou, Seaweed Biopolymer Leather with CMBD, digital image, dimensions variable, (2020). © Courtesy of the authors.

Skin Bible is a conceptual unfinished project that grew out of Dudeck's durational monastic illumination performance. Currently, Dudeck's expedition to Australia has been postponed to January 2022, wherein they and Sperou will merge Dudeck's cells with the seaweed polymers to produce the prototype of the *Skin Bible* for future durational monastic performances, which Dudeck calls CHAPEL. CHAPEL will tour once the global pandemic is under control. The aim for Dudeck is to illuminate the *Skin Bible* over the course of several durational performances. These will then be reproduced and replicated in a manner that references the rise of the printing press which began the mass-production of the Bible as the Religious Prosthetic it is today.

Merging bio- and digital technologies, *Skin Bible*, as performative Religious Prosthetic is in synergy with Hauser's notion of works that contemplate liveliness, ... "to destabilise human scales (both spatial and temporal) as the dominant plane of reference and to emphasize biological and technological microagencies that, beyond the mesoscopic human body, relate the invisibility of the microscopic to the incomprehensibility of the macroscopic. Microperformative positions enquire how artistic methods can engage critically with technologies that exploit life on a microscopic and molecular level to merge bio- and digital media.

Such investigations redefine what art, philosophy and the techno-sciences actually consider a 'body' today, in times when the genre of performance art is increasingly being enriched by a shift towards generalised and persuasive performativity in art. As such, the inclusion of 'aliveness' enlarges the scope of the evolving field of the 'live arts'... The question is who or what nowadays doesn't perform?" (Hauser, 2020).

As a performance artist whose practise was rooted in live presence, Dudeck began to conceive of producing a bible that was made of their own flesh – *their words made flesh*. Dudeck developed a curiosity towards bioart devices to integrate the pages of their scriptures with cells from their own body, to produce a skin that literally and metaphorically grew out of the convergence of Dudeck and Sperou's artistic processes. At various times throughout Western history, scientists and priests have occupied positions of spiritual, moral and political authority – and these performative positions are queered through Sperou's performance of working as an artist in a laboratory, and Dudeck performing as a prophet in the artworld. Rooted in this performative positionality, they also see the *Skin Bible* as a performative artifact, which will in turn be animated through performative interventions. Here, the body of the text – the *Skin Bible* -- is presented alongside other than human forms and the bodies of the artists in chimeric configurations that re-imagine the sacred as post-human and queer.

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Game of Swarms

ABSTRACT

The present environmental crisis has put the public war between current right-wing authoritarian governs and whoever in the world is concerned about the environment in the international spotlight. Donald Trump's withdrawal from the Paris Climate Accord, on June 1, 2017 and the refusal of Brazilian president Jair Bolsonaro to stop the exploitation of Amazon illustrate the emergence of a situation in which the notions of territory and nation-state no longer sustain the reality of our shared planet. The art project *Game of Swarms*, which explores mainly the fact that the individuals of swarms work together without a locus of control, provokes the audience to rethink our current political structures and use the narrative of the game to imagine new forms of making politics and a new way to think our relation to the world. The biological self-organised model of swarms comes as a tool to create new narratives to face today's planetary crisis and foster a more sustainable way of thinking.

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KEYWORDS Art & Science, swarm, network, collaboration, participatory art, climate change.

INTRODUCTION

The relationship between individual and collective motivations, revealed in the interaction of the audience with my artworks, is central to my artistic practice-through which I explore how new meanings, values and ethics are (co-)created through participatory and collaborative processes in art. This investigation has been unfolded through my research on dynamics of living systems and networks-such as swarms of social insects, slime moulds and the nervous system-, whose actors interact at local level generating the behaviour of the collective (Gordon, 2017).

Game of Swarms project is part of this ongoing artistic investigation and a communication device that delves into the collective, self-organising behaviour of swarms in nature and how it inspires more collaborative, sustainable, and more ethical forms of relationship amongst humans, nonhumans and the environment. In a multidisciplinary collaboration with a group of biologists from different research centres¹ and a team of system engineers from the Platform-Cities Madrid², I took as reference the social insects (e.g., ants and bees) and the slime mould *Physarum polycephalum*, a.k.a. ‘the blob’-a rhizomatic-form protist without brain but with great capacity of learning and complex problem-solving-to create an audio-visual piece and a game that guides its participants toward new forms of relationships based on the behaviour of swarms in nature. The ‘rules’ of the game have been co-created through a series of workshops held during the inaugural exhibition of the Mutant Institute of Environmental Narratives, Matadero Madrid 2019. The institution is a space dedicated to foster interdisciplinary artistic practices in connection with the challenges of the climate crisis.

The project is the aggregate of three phases: collaborative research on social insects conducted with scientists; elaboration of a visual narrative to communicate the content of the research and a performative work to engage various parts (e.g., audience, research team), in which through a series of workshops the audience and collaborators were invited to reflect on the biological self-organising model of swarms and left in charge to decide what rules should be set for the game itself. In this article, I will introduce the theoretical frame of *Game of Swarms* in connection with the description of the artworks I produced for this project. I seek to demonstrate that by investigating such ‘smart’ living systems-in which emergence and distributed functioning replace control, preprogramming and centralisation-offers us a portal to debunk centuries-old paradigms that take for granted the existence of a higher force driving and controlling all the life processes.

1 I research living systems with the collaboration of three biologists: Audrey Dussoutour from the CNRS-University of Toulouse/France, Sara Arganda from the Área de Biodiversidad y Conservación de la Universidad Rey Juan Carlos de Madrid/Spain, and Patricia Nunes Silva from the Entomology Department from the University of Vale do Rio dos Sinos of Rio Grande do Sul/Brazil. 2 Platform Cities is an initiative of the City Council of Madrid and the Technical University of Madrid, with the purpose of being a broad space for collaboration and co-design of solutions that contribute specifically to the public policy of the Madrid City Council on Climate Change. Source: <http://www.itd.upm.es/plataform-cities/?lang=en>

SWARM: A FRAMEWORK

'Swarm' has different connotations—from computational studies to the concepts of 'masses' or the 'people'-, but its concept stems mostly from biological studies, having its roots in the field of Ethology. Most interestingly, the behaviour of an organism is seen as at the intersection of the individual, the group and the environment, so the locale of agency is never clear-cut, but it arises from the interactions between the individuals, within the group and in relation to the environment (Thacker, 2004). This view—just like the aesthetics of dynamic large flocks of birds, schools of fish and swarms of bees—suggests an interconnected and interdependent system, whose parts feature a lively, synchronised choreography resulted of their local haphazard interactions.

My interest in social insects came up precisely because of the *distribution* of agency among the parts, i.e., what is orchestrating the network of relationships and actions are what I call the forces of organisation and control within these living systems—rather than a 'master' individual figure ruling everything. The fact that ants and bees are capable of carrying out sophisticated tasks (the collective decision-making in honeybees, the cooperative 'bridge building' and transportation of heavy loads by army ants etc.) without a leader or any sort of planning challenges a whole political ontology of humans. Although the language used to name, for instance, the 'queen bee' or the 'queen ant' holds on the remnants of sovereignty, inside their colony, no one is in charge or telling them what to do. In effect, no ant or bee has a global view of what has to be done, but they react to what they detect around them and to the interactions with other siblings nearby (Gordon, 2017: 125-137). These dynamics result in patterns of local interactions that generate global effects—what we understand as collective behaviour.

In *Game of Swarms*, I examine the more philosophical questions concerning the way how we understand collective behaviour. As the entomologist Deborah Gordon (2017) points out, they revolve around two possibilities equally wrong: the first ascribes to the individual's genes the role of 'programming' all its independent actions, which adds up to make the organism, tissues, or colony; the second hypothesis considers the existence of an entity at the level of the whole system, a sort of superorganism, that drives the relations among the individuals. Both options bear the rational assumption that the *effect is already in the cause*, locating a central control—either for each individual or for the aggregate—responsible for curbing anything that disturbs the monotony of scripted actions. None of these options, however, accounts for the entanglements of overlapping connections that create and transform our world, without any higher 'entity' taking care of it. We need, therefore, new stories and new language, beyond the human frame to describe the swarming forces that take up biological evolution.

To speak about it, I evoked the concept of *Gaia* in Bruno Latour's work (2017). Drawing on James Lovelock's and Lynn Margulis's *Gaia hypothesis*—whose claim is that the Earth behaves as a self-regulating system—, Gaia is described as a sort of *control system* for the Earth (Latour, 2017: 132) that, just like swarms, operates without foresight, planning or *teleology* on the parts of the organisms, but embracing the mutations and ambiguities of its animated

network. Nevertheless, the evolution of humans and their technologies are changing this, and the Earth has now entered a new epoch: the Anthropocene (Lenton & Latour, 2018)-which basically officialises the human gesture of taking control over the Gaia's system. This argument leads to the question at the core of the artistic speculations in this art project: if the planet is, indeed, self-regulating and so are social insects' colonies, swarms and everything that we could loosely define as *life communities*, why then human (dominant) culture does not function with the same system organisation?

The 'swarm' framework, therefore, was created to provoke the audience in relation to our traditional views-stemmed mainly from western philosophy-that have served as structural elements for our current political and cultural practices. It questions Humanism and its 'binary logic of identity and otherness' (Braidotti, 2013) that translated the complexity of relational life-forms into bounded individuals. From this reductive thinking, what was supposed to be a multidimensional web of coexistent species was converted into a vertical hierarchical order, where power is top-down managed and configured as a locus of control from where the rules and protocols of a (human) society flow. The anthropocentric way of living disregards the *sympoietic* forces made out of order and chaos that generate the greatly complexity of collectively-produced networks-where predictability makes room for surprising changes and collaboration is the fittest mode of existence.

The swarm seeks to digest and make compost out of our notions and concepts that no longer allow us to build a sustainable future based on the real biological, natural and earthy richness of our injured yet ongoing living planet. This series of works invites the public to imagine other forms of making politics and create new narratives to relate to each other. In what follows, I will present the video and the participatory work that contend with the swarm framework.



Image 1. Study for video animation *Life Lived Along Lines (Game of Swarms I)*, 2019.

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LIFE LIVED ALONG LINES

Life Lived Along Lines (Game of Swarms I) refers to the idea of 'tentacularity', described by Donna Haraway as *life lived along lines-and such a wealth of lines-not at points, not in spheres* (Haraway, 2016: 32). This work speculates

about the evolution of network topologies in a living system. It starts with a centralised form, in which spherical nodes, the individuals, are highlighted; then it evolves to a distributed network, in which these individuals disappear, but their connections are what compose this collective assemblage of bodies. Relationships shape a collective body. A superorganism: an assemblage of assemblages of other collective bodies. They sing (and shout) together. They harmonise, and also disarrange. They are a chain of actions embedded in a matrix of connections, in which one interaction sparks the next.

In this work, I aim to overcome the dualism of individual and collective- i.e., the notion that they are disconnected levels-, so the emphasis on the connections, the life's *tentacles*, questions what is then an individual: is it a part? Is it a whole? Is it a measure? Or is it a singular form? Is it complex? Or is it a reduction? Is it unique? Or is it a multiplicity of repetitions?



Image 2. *Life lived along lines (Game of Swarms I)*, 2019, video projection, Mutant Institute of Environmental Narratives, Matadero Madrid, exhibition view ©ImagenSubliminal

The understanding of the individual as a detached part from the context or the whole is part of a classical scientific view that has seen the world through its constituent parts for decades, through the processes of *disjunction* and *reduction* (Morin, 2014: 15). Although breaking apart nature into smaller and more basic things in order to analyse them at every level of separation helped us to achieve several scientific discoveries, it has also disregarded the connections between these parts and their relationship with the context or the environment. This approach is aligned with a liberal individualistic view of the subject, based on autonomy and self-determination (Braidotti, 2013: 23-24), in which the old saw of 'survival of the fittest' states that evolutionary processes happen through competition, neglecting the resilience that cooperative behaviour provides to many instances of life.



Image 3. *Life lived along lines (Game of Swarms I)*, 2019, frame of the video, 3'.
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Image 4. *Game of Swarms* – workshop, Mutant Institute of Environmental Narratives, Matadero Madrid, 2019. © Paula Nishijima

In response to this view, this narrative presents the driving forces of the metabolic exchanges between its actors that result in a decentralised, non-hierarchical order, distributing the agency among the parts that compose the living system. It is a visual statement that I seek to put into practice in the participatory work that engages groups from the audience in a cooperative game proposition. In this activity, the ‘swarm intelligence’ does not arise from one

individual's intellectual capacity, but it emerges from the connections between them, which means that the 'ability to relate to each other' is what enables a *collective production of power*.

GAME OF SWARMS: A PLAYFUL METHOD FOR FUTURE-MAKING

In the workshops, the exhibition's audience and collaborators, such as other researchers, were invited to play with a prototype of the *Game of Swarms*. I held four sessions with a total of around 80 people until today. This is a collaborative game, so the first premise is that individuals work together to accomplish a common goal. They use a board, a pair of dice and a set of pieces, which are the materialisation of the network as nodes and edges. The visual representation of the swarm as a network is intentionally binary and poor, so that the players can also propose other forms to make up the pieces. Before playing, I held a lecture performance to guide them through the research on social insects I conducted with the biologists and collaborators.

In order to imply a topological analysis, we have two different kinds of nodes: master nodes (white pieces) and nodes (black pieces). The asymmetry between them (master nodes concentrate more connections than standard nodes) denotes the human exceptionalism in the swarm as well as the existence of power centres. Participants are able to decide together whether they should work for eliminating master nodes or not and the best strategies to keep the resilience of the network.

The part of the *game* comes from a previous work in which I investigated the relation of network and play as two ontologising forces (Sicart, 2018) that materialise into systems and the *magic circle*. 'Play' performs in the side of multiplicity, creating narratives that unravel by relaying connections between players-whose moves are conducted by both strategy and chance. Since my artistic practice is based on social participation, I decided to work with both concepts which resulted in a sort of experiment through sessions of workshop, where the audience is invited to play, but also to create the rules of the game-the real *common goal* of this activity.

Another shared property of play and networks are the rules and protocols, respectively. Both have similar functions, as they make sure that the connections, whether in play or in the network, actually work. This is a simplistic definition, but what is important here is the question that anticipated this objective of 'creating rules', which concerns the matters of intentionality and teleology in swarms. Why, for instance, does a swarm or a flock of birds form the pattern they form in the sky? If there is no central control, then how are the actions created, started or allocated? Although researchers usually go for natural selection or genetic determinism to explain teleology in self-organising systems (Thacker, 2014), Kant, in *Critique of Judgement* (1790), had already accounted for the necessity of using teleological principles in biological organisation (Kauffman, 1993: 7-8), so to make it intelligible, in other words, *logic*.

Indeed, players started the game having trouble with the lack of a clear purpose-but swarms actually do not have it. Even if they display an apparent

global pattern, it does not mean that the swarm prioritises the group over the individual, i.e., the parts are not subservient to the whole (Thacker, 2014). The units and the aggregate exist simultaneously and because of each other. Of course, one might think that this is not true, as ants and bees work for the colony all the time, for instance.

Considering that the parts work for the aggregate is, however, to return to the hypothesis of either having some kind of central control or a superorganism at the level of the whole system commanding all the local actions. What we call rules or algorithms in collective behaviour are the combination of local interactions that generates the behaviour of the collective. This changes the reference from the whole, as described above, to the local, as these mechanisms are carried out at the level of the individual and its relation to immediate neighbours-which essentially guides the forces of self-organisation.

Hence, the elaboration of the rules by the participants is also a way to challenge the game's necessity of having a final objective. They are left with the task of 'regulating' a system without a ruler and a clear goal, but using the *agency* of each node added to the board. This is our *response-ability*, as Haraway (2016: 16) says, because if the rules are created at the local or micro level, each of us has the power to make decisions and adapt to the transformations of our network. Acknowledging this power of micro individual decision-making is a fundamental step to reconfigure our relation to the world.

It is in the effort of imagining, creating and testing new rules collaboratively, that the game offers an opportunity to explore individual identities as historical inheritance of human social and cultural constructions-especially those 'western'-, encouraging their interrogation and the collective building of new ways of thinking. By generating these reflections, I wanted to do a revision of our *human* theoretical formulations as a way to redistribute the agency to local agents-the audience-and make them change stories, create their own narratives, and, more importantly, recognise the importance of doing this to reinvent new ethical relations and values suited to the complexity of our times.

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The Suffering of the New Idiots

ABSTRACT

Without the phenomenon of doubt one cannot think of a revolution. It needs the vision of another being. Gilles Deleuze and Félix Guattari speak of the old and the new idiot. The old idiot wanted evidence. He wanted to get to that evidence through himself and he would doubt all truths, even the simplest ones. The new idiot hates evidence. They are of no interest to him and there is no question of resigning himself to this evidence. The new idiot wants the absurd and that is how a completely different picture of thinking emerges. The tension between old and new brings the mindsets to collapse and the sustained tremor shakes the established knowledge. If the old idiot wanted to find out for himself what was understandable or not, what was reasonable or not, what is worth saving or not, what may or may not get lost, then he finally has a challenger. The new idiot wants the lost, the incomprehensible, the absurd to be returned. The new idiot exceeds, but his function in society is not recognized. We need more new idiots.

KEYWORDS The New Idiots, Gilles Deleuze, Felix Guattari.

Absent the phenomenon of doubt, revolution is inconceivable. A revolution requires the vision of the other, and this other embodies the revolution. The quintessence of the revolution, its core, can only be instantiated by the Other. But this Other is not utopic, rather it is atopic¹, restless, attentive, silent. In order to better understand the atopic, the silence, the restlessness or even the attentiveness, a brief digression on the phenomenon of the idiot is worthwhile. As Byung-Chul Han opines, “The idiot alone has access to something completely different” (Han, 2017: 84).

Han refers to a lecture by Gilles Deleuze, who contends that the function of philosophy is to play the idiot. This is because the idiot can access the truth and played an important role in society until the 17th century. Since then, idiotism has become ever more closely linked to the field of philosophy, and any philosopher who creates a new idiom, a new language, or even a new way of thinking “will necessarily have been an idiot” (Han, 2017: 81). This new idiot excels, but his function in society (and art) remains unrecognized. I contend that we need more new idiots. In this brief discourse, I will advocate for the new idiot and his transgressive nature.

The Platonic conception of utopia assumed that man is a being fallen from heaven (the so-called *topos uranikos*). He landed in a phenomenological world (*phainomena*). During his descent, man passed through the river of forgetfulness (Lethe) and lost all memory. His birth is thus divorced from the realm of ideas. He is effectively unconscious. This is the departure point for my advocacy of the new idiot.

The well-founded existence does not negotiate, nor does it strive for a point from which, finally, there is no return. It does not know tireless obsessions that can destroy the well-formed circles of life. Indeed, as Michel Houellebecq writes “Every great passion ends in the infinite” (Houellebecq, 1991), lending credence to the concept of continuous development. Questions arise. What is our - or rather your - passion? What obsession do you suffer from that constantly invokes delirium and thus brings forth life? Which obsession leads to satisfaction? These questions pierce us to the quick and carve deep furrows of desolation into our being. This burning passion may not always be aesthetically pleasing, but it remains potent and exists because it enables pleasure, frenzy, and the exploration of limits of the conceivable and the experienceable. Survival in peace and quiet does not exist. “Every society has its weak points, its wounds. Put your finger on the wound and press” (Houellebecq, 1991). Once again, this last suggestion stems from Houellebecq, who for many is both a genius and an ‘incarnation of the idiot’.

Debauchery, which sometimes culminates in idiocy, is the new goal, because from now on life is to be lived. To fear the idiot is to fear life and to degenerate into the mundanity of a well-cultivated existence. But fear does not arouse vice. As the unforgettable Georges Bataille writes, to be feared are “the inconsequential around him, the marionettes, men and women, drifters, idiots, the bored.” It’s hard not to be an idiot, not to drift away. It’s difficult to

1 In the classical Greek sense of ‘atopos’, i.e. out of place, strange, odd, eccentric.

avoid the puppet-strings of an unconscious life. It's a struggle not to suffocate in a morass of tedium. We must of course challenge mundane hypocrisy, not merely sporadically, but consistently. Repetition is the key to change. Piety provides truth as a slap in the face, writes Bataille, continuing with "The heart is human to the extent that it rebels, which means that to be human one must not bow to the law" (Bataille, 1997: 171). Man has become unfree. The absence of freedom leads to powerlessness, and without cunning there is no escaping unconsciousness. We have an answer for everything and constantly forget that it is the questions, not the answers, that constitute the essence of man. Moreover, we are often confronted with foolish answers provided by fools who are unreflective, lazy or even actively refuse to think.

But there exists another instantiation of the idiot. It is time to adopt, indeed to demand a new approach, to proclaim a new obligation for humanity: *become idiots*. The idiot is a human liberated from all preconceived notions. Man comes into the world as a being separated from ideas (*idioties*), which is why Fyodor Mikhailovich Dostoevsky conceived of the idiot as a perfect and beautiful man, and depicted his impossible failure as result of human ugliness (Peter Sloterdijk). The savior in the dominant system of preconceived truths is simply a nobody who is not backed by a higher power. The idiotic subject can behave as if it were not merely itself, but its doppelganger, the double of itself and the potentially intimate narrator of every encountered Other. In the presence of such an idiot, benevolence becomes intensely transformational. His mission is not to convey a message, but to create a form of intimacy through which subjects can contain and recapture themselves. The proof is in the pudding: It is possible to leave powerlessness behind: Become idiots and it will succeed.

We set foot once again upon the field of freedom. For Erich Fromm (1941), freedom is not so much a fact as a possibility. He focuses on an authentic realization of human personality. "Freedom must first be won in the struggle against the obstacles and conditions to which man is constantly exposed." In this regard, Fromm is in line with Plato, Marx, Spinoza, Bergson, Kant, Freud or Mill, all of whom contend that freedom is something that must be conquered, and only by conquering freedom can we truly become free. In this sense, freedom is the "revelation of human dignity or (...) the essence of man himself, that is, what he is and what he is capable of being, despite all the barriers, obstacles and limits imposed by his mortality." Only by leaving powerlessness behind does it become possible to experience individual freedom. Let us therefore be hospitable when powerlessness knocks, for by hosting it, we enable ourselves to eventually open the door to freedom so that we may leave it behind for good.

Gilles Deleuze once contended that the function of philosophy is to play the idiot. In keeping with Michel Foucault's (2013) devastating analysis of madness and society, the idiot's ability to access the truth enabled him to fulfill an important social function until the 17th century. Since then idiocy has become an integral aspect of philosophy. Let us not forget Vilém Flusser's remark that: "The dynamism inherent in thought itself can be expressed as the desire to both overcome and surrender oneself simultaneously" (2021).

As already mentioned, Deleuze and his congenial partner Félix Guattari speak of the old and the new idiot (Han, 2017:82). The old idiot wanted certainties. He wanted to arrive at these proofs on his own, and to do so he would doubt all truths, even the most obvious. The new idiot hates certainties. They do not interest him and acquiescing to such certainties is unthinkable. The new idiot wants the absurd, and precisely this approach gives rise to a completely different mode of thought. The new idiot will never accept the truths of history.

The tension between old and new has the potential to collapse prevailing conventions and its sustained dissonance disrupts established epistemologies. If the old idiot wanted to find out for himself what was comprehensible, reasonable, indispensable, or even worth preserving, then he has finally found a contender in the new idiot. The new idiot desires the rehabilitation of that which was dispensed of, of the incomprehensible, of the absurd. If one survives the metamorphosis of the old idiot into the new idiot, then substantive change is ensured, because one thing is certain: from the chrysalis of the idiot emerges someone entirely new. A man who has lost his mind and thus achieved a new manner of thinking and speaking. This form of idiocy is a practical manifestation of freedom. At the present time it remains true that we can freely express our opinions, so freedom of expression appears less of a problem.

More problematic however is that man has problems creating spaces of solitude and silence in which he can find that which is worth expressing. It is noteworthy that in many respects repressive forces are not actually *preventing* us from expressing our opinions, but instead are *forcing* us to do so. "What a relief it is to not have to say anything for once and to be able to remain silent, because only then do we have the opportunity to create something increasingly rare: something that is actually worth saying" (Deleuze, 1995: 129). What is addressed, then, is liberation. The liberation of man in general, his liberation from the ego. Fortunately, the liberation from the ego is no longer the exclusive reserve of the mystics, but can be achieved through intellectual reflection. The new idiotism, which is not really that new, can be considered as an intellectual pursuit, a pursuit that is clearly transgressive in nature.

At this junction it is also worth considering the potential of this new idiocy for artists. Being or becoming an idiot without losing sight of the common good is a challenge that the art world has, in some instances, found particularly challenging. The instantiation of idiocy, when practiced in the interest of the common good, is not to be viewed with fear, but rather calmly welcomed for its transformational potential.

Why is it worth engaging with the idiot? Because by engaging with the idiot, one also engages with possibilities that transcend the conventional spectrum of views, approaches, phenomena and the like, which in turn enables the individual to bypass traditional forms of criticism and resistance to the phenomena of transgression and transformation. An apt image is that of the idiot standing at the threshold to a universe of new possibilities. This threshold, which must be transcended, is characterized by: a) lack of reflection as a form of consciousness and b) unconsciousness as a state of being.

Of course, art also wants to grace this threshold. But as Zoran Terzić (2020) writes, the economy also wants to pass through this threshold, and even worse: everyone wants to set foot on this threshold of limitless possibility. Everyone wants to be an idiot. The idiot, writes Botho Strauß (2013), is a riddle. The idiot has not forsaken the enigmatic aspect of his own nature, and thus he is diametrically opposed to the rest of the world which has long since lost its taste for solving riddles. In ancient Athens, the *idiotes* was a private person who cared only for his own personal affairs and was thus unsuitable for affairs of state. The Great Dumbing Down poses a grave threat to mankind by providing an epistemological framework for nonsense to be considered a legitimate mode of knowing. The idiot's ability to bypass traditional gate-keeping structures enables him to directly address, undermine and eliminate entrenched synergies of stupidity and nonsense.

As we come to a close it is worth recalling the words of William Kentrige from his 2017 lecture on Freud entitled 'In Defense of the Less Good Idea (sigmundfreudmuseum, 2017),' where he pointed out that Freud characterized the field of psychoanalysis as a romping ground. In conventional terms, the romping ground was originally a place for acrobats, a place of conflict, jousting, and knightly pursuits. Freud describes the romping ground as comparable to the back and forth between the patient and the analyst. Kentrige then connects the concept of the romping ground to the art world. The artist's studio, in his view, can be viewed as a contemporary equivalent to the romping ground and is simultaneously a protective zone for the new idiocy. Just as there is nothing in psychoanalysis that is too stupid to say, there is nothing one can do or say in the studio that is forbidden. The realm of the possible is open, or rather, it is to be opened. The possibilities that are open to the artist are to be explored, discovered, and grasped. To be an idiot, to become an idiot, without losing sight of the common good, is the sublime essence of art itself, and with this in mind we can enter the chrysalis of the idiot with a clear conscience, and we can emerge transformed. Idiots who are not *idiotes*.

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Snowflakes: The Individuation of Melting Memories

ABSTRACT

This paper looks at Boryana Rossa, Guy Ben-Ary and Oleg Mavromatti's collaborative work *Snowflake* (2005/2016) and Sun Yuan's work *Honey* (1999) in order to explore the question of what Bernard Stiegler calls *epi-phylo-genetic memory*. I will engage with the philosophy of *individuation* developed by Gilbert Simondon — a major influence on Stiegler's thought — in order to unpack the main premisses that are at stake in the concept of *epi-phylo-genetic memory* and to argue that it can be properly understood only in an ontogenetic framework. This article contends that the problematic of memory is uncovered only in as much as we think *being* as becoming, that is to say, in as much as we understand *being* as a dynamic *pre-individual* relational field that produces individual beings. In this light, *epi-phylo-genetic memory* will be framed as a process integrant to the construction of the embodied thinking subject, but a process whose failure (and with it the failure of the embodied thinking subject 'itself') is intrinsic to its movement.

KEYWORDS Individuation, Philosophy of Technology, Memory, Bioart.

INTRODUCTION

Snowflake (2006/2015), the work of Boryana Rossa, Guy Ben-Ary and Oleg Mavromatti, repeatedly feeds the digital image of a snowflake, as an array of electrical impulses, in a network of neurons grown in a petri dish. The patterns in the neural transmissions, that are formed as a result, represent a kind of 'memory' of the snowflake for the living neural network. The neural network is subsequently frozen in order to 'capture' this memory — or rather in order to critically think about the possibility/impossibility of such a 'capture'¹. According to the presentation of the work on Ben-Ary's website, it critically examines the possibility of biotechnological manipulation of brain plasticity, while at the same time bringing into conversation the idea of eternal life in the form that it appears in cryonics — the possibility of freezing the human body in order to be 'awoken' in an indeterminate future (Guy Ben-Ary Website: n.pag.).

The crisis that the spectator faces with respect to *Snowflake* is punctuated by the questions: What is memory? What does it mean to preserve a memory? (Given the fact that memory is a figure of preservation we can glimpse a sort of *mise-en-abîme* implied by this question, the recursive interplay of preservation of preservation) And, what is the relation between memory and technology? At the same time, life, death and the passage between them — dying, resurrection — are themes that coagulate around this work against the main underlying problematic of memory².

Rather than providing a close reading of the work and analyzing its contexts, what I would like to do is to explore and get lost in the space of this crisis that, I claim, *Snowflake* opens up for the spectator³. Taking our hint from Bernard Stiegler's philosophy we will start with the question of technology, and it is by unpacking the underlying premisses of the problematic relation between technology and memory that we will also be able to touch on what memory *is* and on the overtones of life, death, dying and resurrection that inhere in this question.

EPI-PHYLO-GENETIC MEMORY

Stiegler's theory of memory operates a tripartite distinction between: (1) *phylo-genetic memory* — a kind of memory that drives the becoming of a whole species,⁴

1 Initially, in 2006 *Snowflake* used mouse neural cells, while the 2015 instantiation of the work for *Neuroplastika* used neurons grown out of Ben-Ary's stem cells (Ben-Ary et al., 2015).

2 Themes only accentuated by the fact that, due to a technological failure, the first instance of the project melted, died. See (Ben-Ary et al., 2015).

3 It is not the place here to develop on a theoretical level on the possibility of understanding an art work as the opening of a crisis (a crisis which bears on the very identity of the embodied thinking subjects that we take ourselves to be). Nonetheless it would be important to note that Ben-Ary's writing about their artistic practice does support such a direction in as much as it is underlying that projects such as *Snowflake* 'problematize,' 'pose questions,' and provoke for the artists and for the spectators a constant confrontation with ethical questions regarding our understandings of consciousness, intelligence and sentiency (Ben-Ary et al., 2015).

4 Although this is not directly problematized in Stiegler's text, in a discourse grounded in the problematic of individuation, the very category of the 'species' can make sense only as an actualization, as a partial solution, that coagulates only as an effect of what Stiegler calls *phylo-genetic memory* — on the 'species' as actualization of potential relations see (Deleuze, 1968/1994). In other words it is not that the 'species' affords for a specific kind of 'memory', but rather that a specific kind of memory performs the 'species'.

those predispositions that precede and shape the individual from outside of its own experience in relation to the environment that it becomes *in* and *together with* (inherent predispositions of which one of the most salient examples is the genetic code); (2) *epi-genetic memory* — those memories that emerge for the individual from its experience, from its becoming in and together with its environment, and that sometimes can be transmitted to other individuals but that cannot act as a collective memory that shapes the individual from without (for example the memory afforded for by the nervous system); (3) *epi-phylo-genetic memory* — the kind of memory afforded for by technology, and that according to Stiegler characterizes our being-in-the-world, a folding that allows for the individual experience to be fed back as a vector into the being of the collective, while at the very same time allowing for the being of the collective to shape the individual experience from its outside through the technological object (Stiegler, 1998). *Epi-phylo-genesis*, 'the conservation, accumulation, and sedimentation of successive epigeneses, mutually articulated' (Stiegler, 1998), opens the individual towards a past and a future that are not its own (that come from outside of its own experience) and yet that are intrinsic to its existence — in as much as the technological object is an archive of past experience and a set of affordances that shape the possibility of any future experience. That is to say, the technological object functions as a hinge between the individual and the collective, also between the past (the archive of actions and knowledge that the object is) and the future (the affordances that it opens up).

In the reading that I propose here, what is at stake in Stiegler's theory is not a claim that memory can be exhaustively categorized in these three types — and in fact a closer analysis would probably reveal many other essential thresholds in the problematic of memory that would complexify this account — but rather to recognize the special position that the technological object has with respect to the question of memory, a position that significantly changes the dynamic of memory as it happens in the absence of the technology. One step further, we will follow Stiegler in recognizing that the kind of thinking that we perform, or that performs us, our being-in-the-world, is always already technological, it happens as a consequence of the dynamics of *epi-phylo-genetic memory*. The kind of beings that we (never quite) are and the kind of thinking that we perform (or, that performs us) always already pass through technology; there is no immediate existence, the world and thinking (as they happen for us) come to *be* as figures of a being-in-the-world that necessarily passes through the technological milieu. From an empirical perspective, this is simply to say that our experience of the world is mediated by technology not merely incidentally, but necessarily. The world we live in and together with is shaped by the affordances of our technologies. From an anthropological perspective this means to recognize that there was never a fully formed 'human body' that invented tools, but rather, with Leroi-Gourhan cited by Stiegler, that a body which was not yet 'human' invented the tools that shaped it into being 'human.' In other words, our brains, our thinking, our being-in-the-world are shaped by the tools just as much as the tools are shaped by us, and could have never existed without the underlying technological milieu. 'The human' emerged (in disappearing) through its technology. At an ontological

level, this is to say that Da-sein's opening towards a past and a future that are inherent to it and yet that do not belong to it, the possibility of being towards death, passes through the technological object, that Da-sein's existence is a fall into technology (Stiegler, 1998).

Two main points that we will take from Stiegler in order to navigate the crisis that *Snowflake* provokes. First, our kind of thinking (including our memory) is always already technological — in as much as our experience of the world passes through technology, in as much as our nervous systems are shaped by technology, in as much as our kind of being-in-the-world is intrinsically technological. Second, strictly related with the first point, the technological object can be understood as a vector for a particular form of memory (epi-phylo-genetic memory), the very memory that makes us who we (never quite) are.

MEMORY AS POTENTIAL

This is the point where I would like to bring into the discussion Sun Yuan's work *Honey* (1999). *Honey* consists of a dead human fetus placed upon the face of a deceased old person encapsulated in a bed of ice (Sun Yuan and Peng Yu Website, n.d.).⁵ Obviously a work that engages with the problematic of death and life, of lost memories and un-lived memories as well as with the impossible relations between them. The dead body of an old person, memories of snowflakes forever lost, irremediably. The dead body of an unborn child, memories that will never happen, irremediably. What is lost? What is it that cannot be captured?

The answer seems to be: 'lived experience', or rather 'living', 'experiencing'. What does this mean for our understanding of memory? The crisis deepens.

We have to take a step further in this framework based on Stiegler's philosophy. In order to account for 'living', 'experiencing', we will have to understand memory not as a set of stored unities, but as a potential always yet to be performed⁶. A tool can be said to be a vector for *epi-phylo-genesis* only in as much as it is used (or indeed misused) as a tool; or, more generally, in as much as it is experienced as knot of relations that encompasses the being of the 'one' who experiences. A hammer does not function as *epi-phylo-genetic memory* for a stone, nor for the viruses that might accumulate on it, nor for the bacteria that it might harbour, etc. It functions as *epi-phylo-genetic memory* for beings that

5 On the artist's website the materials listed for this work are: bed, old man's face sample, ice (Sun Yuan and Peng Yu Website: n.pag.). Thomas Berghuis in *Performance Art in China* in the description of this work mentions the 'head of a full grown man buried in the ice' (Berghuis, 2006: 123), while diverse articles in newspapers and magazines talk about the body of an old man buried in the ice. For the online spectator the exact composition of the work, its materiality, will have to remain ambiguous, and this is not without consequences given that the crisis that we are exploring is predicated exactly on an ambiguity regarding the body in its materiality.

6 Stiegler's position in this respect seems to be rather ambiguous: on the one hand memory as a process appears to be at stake in the concept of *epi-phylo-genesis* and in talking for example about the *epi-phylo-genetic vector* (Stiegler, 1998: 142), on the other hand memory is still understood in terms of *retentional finitude*, and as an *object* of industrial exploitation (Stiegler, 1998: 276). Our claim here is that memory cannot be coherently understood in terms of identity, but rather as a process that can account for the emergence of identity in the first place. In other words, that the problematic of memory (as it emerges in the crisis that the two works discussed here open up) is exactly that of the slippage between these two incongruent understandings of memory in Stiegler's framework.

can enter the sphere of affordances that the hammer opens up, by using it or misusing it, or, more generally by inscribing themselves in the knot of relations that the hammer is and provokes (and yes, these beings become towards who they never quite are only in as much as they are inscribed in these relational fields). If a technological object is a form of memory, it is so as a potential to be performed, and not as a set of unities equal with themselves that are 'stored'. A hammer, a flake of flint, is not a form of memory in itself, it is memory in as much as it opens towards a specific way of being-in-the-world, in virtue of its diagrammatic space of potentiality⁷.

Likewise, *epi-genetic memory*, the memory coagulated out of the experience of the individual, for example the memory reliant on the nervous system (the memory that is questioned by being 'frozen' in *Snowflake*), does not exist in itself but as a potential to be performed, as a pattern (in the sense of diagrammatic space of potentiality) that could be actualized through a relational dynamic that involves the living individual in its intimate intertwining with an associated milieu (with its environment). The memory of a snowflake, as explained with respect to the nervous system, is the potentiality of an experience, and not a stored experience — the potentiality that, as a result of the becoming of the individual intertwined with its associated milieu, an electrical signal will travel along an (im) probable neural path, and that in doing so it will actualize for 'me' the experience of the remembered snowflake (always slightly different, always unequal with itself). The memory of the snowflake is not there as a unity consistent with itself any more than the snowflake 'itself' is. Which is also to say that remembering the snowflake does not happen as a kind of search in a database, but as a knot of relations in an internal/external environment.

At the level of *phyllo-genetic memory*, the fact that memory is potential is already widely accepted as long as we agree that the genetic code does not fully define the living organism, that the genetic code is not a script that will be deterministically enacted, in other words, that genetic code is not *fate*. The living organism always remains at the level of the genetic code a diagrammatic potential to be actualized in experience in relation with its (interior/exterior) environment, and life itself is this tensile relation between the (never quite fully determined) living individual and its environment.

It starts to become clear that we need a distinction between memory (remembering) as lived experience (or rather 'living', 'experiencing') on the one hand, and systems of individuals that can afford for the lived experience of memory to happen, systems that we will tentatively term *archives* inspired by Derrida's definition of the term in *Archive Fever*⁸. The technological object, the network of neurons, the genetic code are such external archives (yet the very possibility of every interiority), and considered in themselves, according to a logic of exteriority, they cannot account for 'living', 'experiencing', for the memory of

⁷ I am using here Jussi Parikka's understanding of *diagrams* from *Insect Media* (Parikka, 2010).

⁸ I will not have the space here to develop on the relevance of Derrida's discussion of the archive in the present context, I will just point out that, according to Derrida's understanding, the question of the archive is the question of the exteriority of the trace, of the very form of exteriority that produces the possibility of the interior in the first place. The question of the 'arkhē' is the question of the (lack of) origin of subjectivity, in Derrida's deconstruction of the Freudian discourse (Derrida, 1998).

the embodied thinking subject. They are not only external to the individuals that they subtend, but external with respect to the level of individuation at which these individuals emerge. The problem of the relation between archives and memory will have to be that of the crossing of a threshold in the process of individuation. All this will become more clear after we will take the time to quickly unpack the problematic of individuation as it appears in the philosophy of Gilbert Simondon. For now, we will notice that the problematic of the memory of the snowflake hinges on the potentiality of the experience of the embodied thinking subject — in as much as the remembered snowflake is not the same thing as the multitude of superimposed archives that make it (im)possible. In order to ask what memory is one needs to address this tension between the externality of the archive (the grid of neurons, the genetic code that helps shape from without the neural system, the technological milieu that likewise shapes the nervous system through the experience of the world that it affords for) and the lived experience of embodied thinking. And this is where *Honey* is painfully relevant. From the perspective that we are attempting here, what is captured in the bed of ice is the reminder of the impossibility of capturing memory as diagrammatic space of potentiality, as ‘living’, ‘experiencing’. A frozen flow is not flowing⁹.

MEMORY AS INDIVIDUATION

That brings our discussion of memory in *Snowflake* to hinge on the problem of the passage between multiplicity and identity, that is, between a network of living cells — also a technological network — (multiplicity) and the experience of the embodied subject that remembers (identity). Yet, paradoxically, at the very same time, the problem is that of the passage between the unity and identity with themselves of the cells to the more-or-less-than-unity and more-or-less-than-identity that characterizes embodied thinking, memory (remembering).

We will approach this problematic (of the emergence of identity against the background formed by a multiplicity of relations that cannot be rendered back to the figure of the individual consistent with itself) from the perspective of the theory of individuation formulated by Gilbert Simondon.¹⁰ Simondon’s basic insight is that the quasi-entirety of the philosophical tradition inadvertently presupposes the figure of the individual while trying to account for its *being*, falling thus into a vicious circle. The problem is: how come individuals *are* and can be perceived at all against a background of relations that do not contain the individual either in the form of a *telos*, or in the form of an inherent principle that would guide the becoming from within (Simondon 1958/2013)? In other words: How come atoms? How come crystals (physical individuals)? How come living cells (living

⁹ Of course, the question remains open to whether technology could advance or not to the point of mediating back and forth between ‘frozen’ bodies and living experience. But in order for that to happen, what would have to be ‘frozen’ is not only the body of the individual, but also, in a sense, its environment; what would have to be maintained is a pattern of potential relations that are not contained as such at the interior of the individual.

¹⁰ It is worth mentioning that Stiegler’s understanding of technology is deeply indebted to Simondon’s thinking, hence the relevance of further unpacking the question of *epi-phylo-genetic memory* against the main arguments of Simondon’s theory of individuation.

individuals)? How come conscious subjects (psychic individuals)? But also, and interlinked with these first questions, how come the perception of a snowflake? How come the memory of a snowflake?

In order to explain the emergence of individuals (stones, cells, embodied thinking subjects) — that is, the process of *individuation* — Simondon proposes that *being* as such is pre-individual, an amorphous system of relations with many distinct orders of magnitude (Simondon 1958/2013).

For Simondon, individuals are merely the results of the interwoven dynamic of the pre-individual fields, and in fact, strictly speaking, individuals never quite *are*. Thus, instead of a world composed of individuals and of the subsequent relations between them, Simondon proposes (in line with his understanding of 20th century science and technology) that *being* is a relational system that precedes and creates individuals. One cannot talk about individuals prior to the relations through which they are *individuated*, and, in fact, one cannot talk about individuals in themselves at all, but about systems that reach different stages of individuation — never about the completely stable figure of a unity consistent with itself (Simondon, 1958/2013).

For Simondon, *being is becoming*, it is a problematic tensile field that finds its partial solutions in the fragile, temporary and always unfinished coagulation of individuals. And the relation between the individual and the pre-individual problematic field is at stake in the distinction between three main stages of individuation as identified by Simondon: *physical individuation*, *vital individuation* and *psychic individuation*.

In the case of *physical individuation* the problematic remains exterior with respect to the individual that it creates. That means, following Simondon's example of crystallization, that in the case of the crystal (in the *physical individual*) the forces that provoke its coming into being as an individual (the pre-individual relational fields that drive its becoming) are solved in a state of thermodynamic equilibrium (Simondon, 1958/2013). For the *living individual* (the process of *vital individuation*) on the other hand, the problematic is recursively folded upon itself and remains inherent to the *being* of the individual. An individual is living to the extent to which it inherently carries a rest of the problematic that drives its becoming, to the extent to which the final equilibrium is deferred. That is to say, an individual is living to the extent that it offers a partial solution to its *pre-individual* problematic without exhausting it (Simondon, 1958/2013). The living individual contains the *pre-individual* problematic that drives its becoming as its interior/exterior associated milieu, that is, as its interior/exterior environment (Simondon, 1958/2013). Which is to say that the *vital individuation* is a folding of *physical individuation* upon itself, a folding in which the problematic that drives the becoming of the individual becomes a problem for the individual itself as its interior/exterior environment.

Psychic individuation is driven by a further intensification of the problematic, that emerges when the *pre-individual* rest associated with the *living individual* (which appears for the individual as its environment) cannot be collapsed into

a solution consistent with the unity and identity of the living individual itself¹¹. *Psychic individuation* happens when the unity and identity with itself of the living individual becomes an open problem against the background problematic that is the associated milieu, when the living individual becomes a problem for itself — which is to say, when the living individual discovers itself as part of the environment, as part of the problematic that drives its becoming.

From this perspective, the problematic of *psychic individuation* (embodied thinking) tends to develop into two intersecting directions that cannot be collapsed into each-other: How come an embodied thinking subject emerges as an individual in the world? How come the experience of a world composed of inter-relating individuals? Yet, this two-folded process of individuation (the emergence of subject and objects both as ‘real’ entities in the world and as experiences for the subject) is driven by a contradiction, is subtended by an essential crisis, in as much as the process of *psychic individuation* relies on a problematization by the individual (that never quite is) of its own corporeality, of its own living individuality. In order for *psychic individuation* to happen in the first place, the individual needs to have itself as an *open problem*, to deconstruct its own individuality (which can emerge only through this deconstruction). The process of becoming towards oneself as an embodied thinking subject is necessarily driven by the question-mark that bears upon one’s embodied identity. And, at the core of this contradiction comes to be the memory of the snowflake: the (im)possibility of the conscious subject as an ontogenetic ‘reality’ relies on the (im)possibility of canceling the problematic that drives its own becoming into a world of individuals relating to each-other, which is to say, relies on the (im)possibility of perceiving and remembering the snowflake as a unity consistent with itself:

In as much as one is alive and thinks, one bears the *pre-individual* problematic that drives one’s own existence. What is at stake in any form of thinking, any process of *psychic individuation*, is both being opened towards the relational problematic that drives one’s becoming (and as such being more-or-less-than-one and more-or-less-than-identity — which also means inherently problematizing the world as a system of individuals and one’s embodied being as it emerges in this system) and at the same time canceling the problematic in a (never stable) partial solution: in a system of individuals relating with each-other (on the one hand the world that we exist in, composed of stones, living cells, technological objects, snowflakes, memories of snowflakes; and on the other hand one’s own body, the body identical with itself that the entire system hinges upon). The experience of remembering the snowflake is part of this contradictory process of *psychic individuation*, of solving the pre-individual problematic that drives one’s becoming (‘living,’ ‘experiencing’). The individual in the process of *psychic individuation*, becomes towards itself, as an embodied thinking subject, only in as much as it is opened towards the unknown, in as much as it un-knows itself.

¹¹ This is a possible reading of Simondon’s explanation of the relation between *vital* and *psychic individuation* (Simondon, 1958/2013, pp. 165-166) that holds as long as we maintain the insight that the *pre-individual* problematic is expressed in the process of individuation by the couple individual-associated milieu (Simondon, 1958/2013, pp. 63-65), in other words, that the associated milieu, the environment, is the rest of *pre-individual* problematic (inherent in any process of *vital individuation*) as it appears for the living individual.

The answer to the question regarding the definition of this body that becomes towards being itself as an embodied thinking subject can only be a question mark, it can only be postponed if the process of *psychic individuation* is to happen and to follow its course.

CONCLUSION. MELTING SNOWFLAKES

So, from this perspective, what does the frozen memory of the snowflake mean (*Snowflake*)? What do the frozen 'human' bodies mean (*Honey*)? And how can we think the melting snowflakes, memory, from the nauseatingly intense space that opens in-between them?

The snowflake is always already melting, and so is the embodied being that is remembering it. The memory of the snowflake is not a unity consistent with itself, it is not stored, rather it is a potential always yet to be performed. And in order to perform it, in performing it, in making it present, one has to let it go. The memory of the snowflake is the potentiality (always yet to be actualized) of a specific set of relations between the individual (that never quite *is*) and its interior/ exterior environment. The very event of making the figure of the snowflake present means losing it, as every present is lost, into the depths of memory/forgetting. Remembering is merely the coagulation of a unity that is lost, melted at the very moment when it is coagulated, always a performance to be done, lost while it is performed. What could be said to be 'stored,' frozen, immediately present, is an archive, a set of conditions (links between neurons, genetic code, technological individuals in their materiality) that regarded in themselves cannot explain 'living,' 'experiencing' (although the archives are the necessary conditions of memory).

The memory of the snowflake is necessarily shaped through technology (as the potential experience of an embodied thinking subject), and as such it is not simply something that pertains to a 'human' body, and neither something 'stored' by a technological object, but a potential for the action of an undefinable body (that happens somewhere in between what will never quite be an embodied 'human' subject and what will never quite be a 'technological object') a body always in the process of individuation, always in the process of becoming towards the unknown, towards and away from itself (towards and away from 'self', 'identity', 'unity'). For whom is the snowflake a memory? Who is this body that becomes towards itself through the memory of the snowflake? The answer has to remain a question mark, it can only be deferred and differed if the process of *psychic individuation* is to happen and to follow its course. Being in the process of *psychic individuation* means problematizing one's own embodied being against the background of the problematic field that emerges as one's interior/exterior associated milieu. *Psychic individuation* is driven by discovering one's embodied being as a problem. And the memory of the snowflake is an intrinsic aspect of the tensile negotiation that is thus provoked (*psychic individuation*). What does this mean? That 'I,' the spectator, the 'author' of these traces of spectatorship, (never quite) exist as a thinking subject in as much as 'I' am able to perform the memory of the snowflake — or in as much as the memory of the snowflake performs me — (this is almost self-obvious), but also at the very same moment

that there can be a memory of the snowflake in the first place only in as much as 'I' am becoming towards 'myself' by not knowing who 'I' 'myself' am — by necessarily slipping away from self and identity. And this crisis of un-knowing one's embodied being in the very process of becoming towards it, a crisis that is intrinsic to the potentiality of thinking, opens as a local specific event: the embodied process of spectatorship afforded for by the online documentations of *Snowflake* and *Honey*. Unavoidably, 'I' am saying 'I' and signing this paper as an unknown and unknowable embodied thinking subject, as a partial (necessary yet erroneous) solution to a pre-individual problematic, a solution that passes through a specific technology always already intrinsic to who 'I' never quite am.

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The Ethics of Epistemological Materialism

ABSTRACT

Memetic niche construction. The age of mass disinformation requires a whole new survival strategy. A world of containment, management on an enormous scale, and protocols for tabulation. What acts an artist, a scientist, a philosopher or any other citizen can engage in - how to be in the world. Speculative ontologies look at the mechanisms of place-making that exist and inquire how they can become more accomodating. Scientific knowledge commits to unearthing principles that stagnant institutions don't see and then some artistic analyses and imaginative expressions.

KEYWORDS Great apology of humans.

IS THERE ANY CHANCE OF BEING (THE RATIONAL ARCHEOLOGY OF DIGITS)

Digits, of course, as fingers - discretion. How many ways to count. No one knows where to begin a category but if no one does it confusion is almost certainly guaranteed.

The popular object comes about once we've flooded things sufficiently - changed the landscape - wiped out what we thought we knew and created a new space for new things to grow. Before the computer, there is a flood. That is, there is market saturation of a certain range of objects, social inundation in a class of things that permit creative recombination.

Before the printing press, we have a set of inventions that cascade and explode into social lives - in this niche we have the creative possibility of a printing press - generations before we did not, or its likelihood was slim enough to effectively eliminate the chance of it happening. The fish in water evolves both internally and externally - in reaction and manipulation of their domestic space. For humanity, external manipulation is relied upon much more than average, if there is anything special or singular about our species it is this, even this being a matter of degree.

Philosophies and action of communities both popular and specialized. New media, biological and scientific arts to scientists engaging closely with new cultural forms, educational languages and inscription methods. The thinker has become a science fictional speculator, technological acceleration an industrial mindset creating a corporate challenge (a body challenge) for the working scientist. Art's more nebulous and luxury-oriented institutions boast clandestine idea sets where they lack public pragmatics, offering a strategic incubation platform over the public fandom of their popular equivalents. Between wage slavery and aristocracy there are the new mutants we conceive and send off into the world.

NO HOME WITHOUT CREATION (WITHOUT DESTRUCTION)

The external being is remarkably ill-adapted for its environment, without the skills to make it will be unable to thrive. To destroy, to recreate, to efface and build. Of the beings of chance, externality works by creating more. More possibilities, more contexts, more things. Most of it won't remain, won't be taken up. But just as beings are born and evolve from interminable noise, so new homes will be made in the backdrop of randomness.

The artistic creation is the great apology of humans - sorry biosphere I'm not at home. Accept this as an apology? To know something about the world, we are unable to have that without also having something, doing something with it, making, grasping, twisting, flattening. It's a floor, it's a bed, doesn't particularly matter. Without the hand to grasp, to get a hold of a concept, to graph its structure then play with it, there is little understanding. Sorry environment, I'm here, probably will get annoying - at the minimum I'll redecorate. Probably a lot more.

In each case the political exigency of global health, environmental change and sociopolitical exclusion. Stagnant without a tactical and mobilized front that is able to shapeshift and re-oriented in response to this environment: fragmenting and militarized, globally connected upending local culture reinventing the future.

SPINOZA: A SYSTEM OF TECHNICAL GENESIS

While the rationalist tendency may bracket out the nuances of the subjective world, miss a full objective description of a phenomenon, it thrives at deciphering, dividing and making spaces for understanding to thrive. This is the technical impulse, and the effective way of engaging it is through a rational system. It could seem that overarching structure limits a creative mindset, but it in fact provides it with innumerable channels, it offers a picture in fact entirely open to creative activity, however much its predetermination may dampen inspirational semblance.

The bringing about of new objects is an instancing of rational recombination - the database underlying with the many tokens of the creatable. To entirely infuse the affective body into this structure is to come to terms with subjectivity despite an external being's incredible drive to the objective. To merge an idea of well-being and blessedness within an incisive critical rationalism may make subjectivity appear strange, for we are not used to its objective approach. Yet if an objective reckoning is desired, this might be the genius of a Spinozan method - rational deduction to find the ethos of being.

JJ Gibson:

The world can be analyzed at many levels, from atomic through terrestrial to cosmic. There is physical structure on the scale of millimicrons at one extreme and on the scale of light years at another... the terrestrial world is itself differently structured at various levels from that of crystals

and grains to that of hills and mountains, and the behavior of animals is coordinated to these levels.

XOX Labs makes gestures towards finding paths from art and science that think about sustenance, about context. Biology, philosophy, new media writing, art - between open science and experimental humanities, frameworks and ambling.

ECSTASY THAT PROMOTES MULTIFACETED EXCESS

— the transformation of form in the creative baroque — aesthetics for the bricklayer, for machine cog ecstasy that promotes the mindless serial and variegated a system of objects is a constructed relation to whatever an object is — did you do your homework — is anything the connection between this and that — as building materials are laid out try and make sure you're outside the building — the erotic image, biopolitics in the name of choice, the repulsive image, absorption for the non-participant, the face of things might be enjoyable, the face of things might be completely inhuman also what is a face when you don't have a face it becomes harder to make friends on the internet — also your credibility in court becomes questioned — good argument but you don't have a face so each body part is part of the mathematical human measure thing that proves that humans make great rulers, that the structure of ruler objects are great for determining arm use — you wanted to be a building wall and after a grueling interview process you got your wish now all you do is brag to your friends — the nicest thing about being a computer is all the vacation benefits.

Spinoza:

I have just pointed out that the objectors cannot fix the limits of the body's power, or say what can be concluded from a consideration of its sole nature, whereas they have experience of many things being accomplished solely by the laws of nature, which they would never have believed possible except under the direction of mind: such are the actions performed by somnambulists while asleep, and wondered at by their performers when awake. Epistemological materialism as ethics - the emotions remind me of the day when materials were making minds. They epitomized a scientific ecological position - that there are physical circumstances to be discovered if there's an interest in knowledge.

The first task is to come up with as many explanations of a chair as you can - don't think material think transcendental. You'd think this would be a nod to Plato, you know like formal stuff is more important than material stuff but nope.

Three roles, one a person, another a place and another molecular states that are being described in another molecular language. Who would have thought. Some other characters interact quite naturally with the molecule, others have no real ability to know its existence.

The first thing with the molecule is to build itself into a chair - this is not a tree, this is not an object of contemplation, this is the perennial achievement of utility. Join the atmosphere of the other.

This won't be a lifespan - essentially you're immortal or not it just means you don't really die you just flake off so the parts of you are immortal or at least there's always immortal things around. Everything's leaking basically, like seeping out this and that, if it weren't perhaps this could be a tale of death or something intriguing to the Precarities, but unfortunately it's not. Without death, no life, so instead we have items and those items encounter other items, and if you're lucky it gets dramatic. People start gossiping.

So the chair, this incredible sacrifice of something for another thing, dying and contorting your skeleton into a gift to accommodate those who threatened your existence. It's the most incredible tale of self-sacrifice, of all the wood that suffered through history. So many plant lives lost.

These people they are no strangers to the perils of oxygen. For the trees, it is a world of waste, for others, poison. For the parasite, it is a smorgasbord of wonders - the world is so rich, so intensely full of love. Organic chemistries for the day.

You wish you could exist you really do. But make this into a theatre and you'll see what I mean. Sometimes words are just words. An apparatus is needed that will confirm that you are actually here, that you attended, we'll hook you up and let you know. An apparatus by which we can deduce you. At some point our theatres just don't mirror anything you've ever seen.

But once we give you a pattern you'll be okay. We'll be like ok cool, got it - wood. Oh it's a bunch of invisible things - no problem. I can live with this. In each thing that was invisible to me I found a mirror and in the sunset there was something strange, light.

Crossing Boundaries, Cutting Borders: Looking for New Narratives to Make Sense of this Crazy, Crazy World

ABSTRACT

In recent years, we have observed many transformations in the way we map, measure and conceive of life, generating reflections about its boundaries and its complexity. These transformations have led to radical re-adjustments of the perceived gaps between biology and informatics, the separation between self and non-self, and the neat distinction between species. However, as older barriers are dissolved, new ones are raised. Despite efforts to embrace new perspectives that to consider symbiosis and fluidity as more desirable and theoretically sound concepts, older notions of boundaries persist. Anna Tsing (2015 and 2017) argues that we need new narratives to reveal the coexistence of plants, animals and microorganisms amongst other things, to provide evidence of the needs to rethink older notions of boundaries, and to show how the distinctions, and the barriers that science, technology, society and the state have created are in fact blurred and porous. But how do we find ways to think past (disciplinary, geographical, corporeal, dimensional) boundaries especially at a time when isolation and separation are the only type of relationships we are allowed? In this paper, I reflect on Tsing's invitation to find new narratives, by proposing a new mobile solution to accommodate current and – possibly not too far future– post-pandemic curatorial and artistic practices. Especially at this time of rapid political and natural transformation, finding new narratives becomes not only a way to redefine the future, but also a way of survival.

KEYWORDS Boundaries, Borders, ecology, mobility, curatorial practice, new narratives.

HOUSTON, WE HAVE A PROBLEM! AN INTRODUCTION

In recent years, we have observed a series of transformations in the way we map, measure and conceive of life, generating reflections about its boundaries and its complexity. The idea that information and biology, the virtual and the actual, lie in well-separate containers is gradually dissipating. Different forms of life lie in a condition of cooperation and codependence, rather than competition, as Lynn Margulis suggested with her symbiogenesis model (Margulis, 1999), or, as Stephanie Fishel argues, “nonhuman species, life forms, and processes can nurture multiple forms of life” (Fishel, 2017).

Despite efforts to embrace new perspectives that consider symbiosis and co-production as more desirable and theoretically sound concepts, older notions of boundaries persist. As older barriers are dissolved, new ones are raised. The notion of boundaries assumes that there is a demarcation defining and separating objects, creating the perception of purity and integrity, wholesomeness and unity, all ideal states that seem unachievable (Shotwell, 2016). The same idea of purity is invoked when our bodily boundaries are penetrated and traversed by viruses, microbes, and chemicals (Latimer & Miele, 2013). Today, the idea of purity has come, once again, to occupy a central role: it is embodied in hygiene theatre (Thompson, 2020) and in the metaphors employed to “fight the war against SARS-CoV-2” (Musu, 2020), as if the virus was one entity that could be defeated with a set of well-defined solutions (identified as weapons), or with a single vaccine, or a particular anti-viral medication. Purity explains why it is so difficult for many (including medical practitioners) to acknowledge the existence of the so-called long-hauler, or more generally, why individuals can become virus free, but their body does not just go back to a pristine health.

Boundaries are not only used to distinguish and separate bodies, to discriminate between self and non-self or self and other, or to distinguish between the pure and the contaminated etc..., but also to designate geographical territories and protected enclosures. At this macro scale, boundaries take the form of borders. Borders define and divide territories, create and invent sovereign states, designate geographical and protected spaces. As it is currently defined, state politics is still based on the inside/outside dichotomy, which fits the “pure culture” paradigm in biology: there are bodies that belong and other that don’t, bodies that conform, and bodies that look and behave differently. The divisions are often used to establish flying bans against certain countries or to build walls and other physical barriers. Once again, the example of SARS-CoV-2 and the closure of borders it has prompted is a case in point.

What is the significance of boundaries, and the value of boundary-crossing today, a time when old-fashioned ideas of boundaries appear to have been transcended in favor of more fluid conceptions, yet geopolitical and institutional powers seem to reinforce and build new ones? What to make of these new boundaries when the unexpected surge of SARS-CoV-2 has forced or justified their re-erection? How can such return be reversed in a way that help cope with the complicated situation we find ourselves in today? Anna Tsing (Tsing, 2015; Tsing et al., 2017) argues that we need new narratives to reveal the coexistence of plants, animals and microorganisms amongst other things; to provide new evidence for the needs to rethink older notions of boundaries; to show that the

demarcations and the barriers that science, technology, society and the state have created, are in fact blurred and porous. What would such narratives look?

I believe that at this time of rapid political and natural transformation, the arts can suggest a few valuable strategies of survival and propose possible post-pandemic ideas for new narratives. I have been looking for cues in the current and future curatorial and artistic practices, interpreting artists working at the intersection between art and science as my leads and models. But before I go about my reflections, I should clarify that I am writing this essay while SARS-CoV-2 is still roaming, uninvited, around the World: this has made everything, including speculation about the notion of boundaries and their – desired and potential – crossing, rather challenging. Maybe, it has made it more interesting too, as these days, the mere thought of crossing and transcending boundaries sounds more like a speculative and science fictional affair, rather than something that can be predicted or planned. How do we cross boundaries, to dissolve borders, to intersect bodies, when socializing, travelling, wandering, and engaging with each other is now considered un-kosher and, in many cases, literally deadly?

IDEAS OF “CROSSING”

In the next few pages, I am identifying different ways that we can think of crossing and dissolving boundaries both conceptually and physically with the help of the arts. Several artists have successfully explored the complexity of entangled phenomena, while blurring the boundaries between disciplines, between objects, between modes of re-presentation and display. I call those “ecological modes of display” and “the display of ecologies”. However, the idea of boundary crossing in the age of coronavirus presents a number of complications: in fact, it may evoke sentiments of anxiety, and even disgust and aversion. It could lead to judgement, misinterpretation and conceptual tensions, as too often those who refuse to comply with medical recommendations (see for e.g. the infamous anti-maskers, the deniers, the business-as-usual fools, the contrarians, the covidiot etc..) are conflated with those who hope to find ways of coexistence with the microbial. Finally, it may hurt individuals too, because some of them had no choice but be exposed, because of their race, class or geopolitical location. One is caught between a burning desire to create something new, to take risks, to welcome (or at least to attempt to comprehend) the microbial, and an arresting series of doubts that suggest caution and vigilance, and, especially, a renewed commitment to care. Thus, boundary-crossing in this era goes beyond the multidisciplinary and the ecological: it means to address ethical and epistemological contradictions and to think of open-ended scenarios that are both inclusive and restorative. To this end, I am proposing a possible creative scenario to bring back the idea of boundary-crossings that doesn't just dare, or experiment with the new, but eventually re-socializes, heals, and creates new connections.

Οἶκος and the hegemony of Anthropos

The notion of ecology in its original etymology, from the greek οἶκος, “house” or “dwelling”, is widely used to designate the study of the interactions between

organisms and their environment. This environment does not only include natural forces, but also human-made artifacts and human-caused phenomena that participate in making and transforming it (Plutynski, 2008). Although under the same loose denomination of “environment”, items included in this category are forced into a hierarchy that clearly prioritizes the human. From Descartes to Marx humans have been placed at the top of the pyramid, involved in a power relation where consumption (led by human needs) guides production (or the use of nature to create products) (Casey, 2005). Although acknowledging the intersections between humans and their surroundings, the literature on this topic has mostly kept the former separated from the latter, locating each object animating the world in its own well contained box, associating it to separate kingdoms.

The distinction between the human, the natural and the technological, the animate and the inanimate, has also caused the natural world to become separated from the social. According to Felix Guattari, environmental (or natural), social and mental forces are not only connected, but also inseparable (Guattari, 2000). In fact, any industrial, technological or natural phenomenon is never a product of random intersections but involves a complicated overlapping of enunciations of subjectivities. Ecology designates a series of relations including the intersections between humans and other objects, instruments and processes, the organic and the non-organic, the relations between, and the activity of, scientists and artists, scientists and their public etc... When examined from this angle, ecology becomes holistic and political, as an entire spectrum of power relations unfolds, thanks to the friction and negotiation between all these parts (Robbins, 2004).

String Figures

Ideally, if we want to successfully critique and eventually question these power relations, launching a critique to anthropocentrism is not sufficient. In fact, the current pandemic has amply demonstrated that humans are still at the centre of everything, as emergency precautions have done absolutely nothing to limit waste, preserve the environment and remedy some of the unbalances that caused the spillover of viruses onto the human population. Anna Tsing famously used the Matsusake mushroom as an organism whose survival depends on many variables and affects many other organisms, inviting us to see beyond the sole perspective of the human, since “telling stories of landscape requires getting to know the inhabitants of the landscape, human and not human (Tsing, 2015: 159).” This means not only to become aware of the many anthropogenic and non-anthropogenic interactions, as well as the cross-species coordination involved in the survival of one or more species. It also means to embody, or try to imagine the perspectives of these different species. By taking note of the multiple stories built through layered and disparate practices of knowing and being.

Donna Haraway defines “string figures” those stories that propose and enact patterns for participants to inhabit somehow on a vulnerable and wounded earth (Haraway, 2016, p. 10).” Haraway calls for a multispecies storytelling “full of dying as living as full of endings... real stories that are also speculative with populations and speculative realisms these are stories in which multispecies players who are enmeshed in partial and flawed translations across difference, redo ways of

living and dying attuned to still possible finite flourishing, still possible recuperation (*Ibid.*)”. These stories can be told through scientific data, the perspective of the non-human, the storytelling of the elder, the speculative fiction of literature, the visionary interpretation of the arts etc..

The display of ecologies

In “The Soil is Teeming with Life”, artists Alana Bartol and Amanda White present an animation where nematodes, bacteria, arthropods and other living organisms busily make it across a petri dish-shaped swat of soil (Bartol & White, 2015). Maria de la Bellacasa reminds us that in the ecologically-centred notion of soil creatures do not live in the soil, “they are the soil” as “living soil means that the ground we walk upon is a living multispecies (M De la Bellacasa, 2020).” These creatures do not just happen to populate the soil but are also all contributing to making the soil what it is, engaging in a dance of co-dependency. In turn, De la Bellacasa explains, exposing the beauty and the fascination of the underworld is not “a neutral affair”, as this action does not have just a pedagogical or an aesthetic significance, but potentially puts these creatures at the mercy of exploitation. Exploring and revealing soil and its richness as an ecology implies thinking socially and culturally too, and evokes the power relations that come to identify, constrain and exploit the subject of study (in this case soil) (*Ibid.*).



Image 1. Bartol and white 2015 – animation screenshot. © courtesy of the author.

Ecological modes of display

Several artists who work at the intersection of art and science have adopted “ecological” forms of display in order to emphasize not only the complexity of

the topic they investigate but also the variety of processes that have made such investigation possible. This ecological approach manifests as multipart and modular artworks, creating different, yet connected installations, which illustrates and critically frame the variety of scientific, mechanical and artistic processes participating in the study of a subject or a phenomenon. In addition to revealing the intricacy of specific themes to an audience often accustomed to perceiving them as one artifact or one self-contained object (a map, or an illustration, or a sculpture), these multipart installations propose new ways to understand and communicate multilayered processes and complicated phenomena. The audience can then interpret the work through their personal experiences, their particular socio-cultural background and their comprehension of science.

Composed of items produced thanks to distinctive discipline-specific methods, these artworks also reflect the views and work of different professionals. The work of Elaine Whittaker displays a variety of objects aimed at demonstrating the complicated interpretations and reactions to infectious diseases. Her exhibitions contain installations which can be displayed individually or as a collection of interconnected objects within the same gallery space. Ranging from the film industry's fast paced and apocalyptic depiction of pandemics, to the recent passion for data rich content of news media and armchair epidemiologists, different approaches are placed side by side, in a dialogues with each other and the public, evoking different reactions and interpretations.



Image 2. Elaine Whittaker.
I Caught it at The Movies -
Andromeda Strain. Petri dish, digital
image, agar, Halobacterium sp. NRC-
1. 6" x 6" 2013;

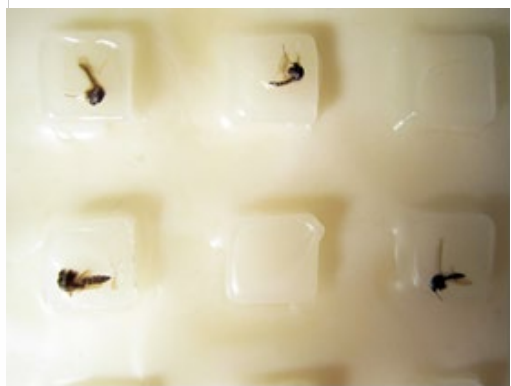


Image 3. The Swarm (detail) Wax, pigment, and
mosquitoes 60" x 40" 2006

Whittaker makes both critical and material use of the symbols and tropes that historically, have described the spread of infectious diseases: for example, while some of her installations have displayed a vessel, which traditionally carried plague infected rats, others employ myriads of dead mosquitoes and chicken bones as media comprising her installations, the first being the infamous main transmitter of malaria and dengue fever, the second being the symbol of the zoonotic transmission

of disease to human beings (Roach Pierson, 2007; Whittaker, n.d.). Whittaker has also worked with halobacteria for many years: this salt-like extremophile appears in many of her exhibitions, connecting different installations, and appearing as an organism fast spreading across petri dishes and other objects. Whittaker's installations create mini-ecologies, which connect scientific facts and techniques with popular culture as well as with personal experiences of disease and pandemic anxiety. Her work reminds us that the spread of infective diseases is not only about modelling and prevention, quarantining and producing a vaccine, but it is also about how media, individuals and communities amplify or neutralize a disease, how their emotional responses affect its outcomes, how their strength can exacerbate or decrease its severity (Buiani, 2014). In other words, what Whittaker's work does, by framing it through a range of installations, is showing how the comprehension of infection diseases exceeds the visual and structural boundaries traditionally assigned to scientific objects, aesthetics, and affective responses.

FUTURES UNKNOWN

As I reflect on the artistic practice of artists who work at the intersection of art and science, consistently cross the boundaries between disciplines, and transcend the separation between human and non-human, I am brought back to today's reality. As I write, the pandemic is still very much raging. Over one year of self-or-forced isolation have transformed behaviours and habits, artistic practices and the way they are displayed, our relationships and the ways we interact and socialize. What will happen when we finally meet again? Will we be capable of performing a handshake again, as Francois-Joseph Lapointe asks in reflecting on his work "1000 Handshakes (Medical Museion, 2014)"? Will the gallery space become a thing of the past (Adam, 2020)? What if instead of fearing the unknown, these days represented by the virus, we started embracing its pervasiveness as a way to cope with the anxiety it causes? Can "embracing the viral" lead towards more sustainable and conscious coexistence and boundary crossing?

I am reminded of the work by Pei-Ying Lin, an interdisciplinary artist, whose long term-project focuses on viruses and viral phenomena. Throughout a series of installations, she asks a recurring question: is it possible to domesticate a virus? Can we become more resilient or more resistant to it (*Pei-Ying Lin - Tame Is to Tame*, 2016)? One of her recent works consist in a performance during which dancer and choreographer Hsin Yu Chang gracefully dances through and avoids objects and appliances potentially infected. knowing the risks and using cautions is also a form of coexistence and cohabitation (Lin, 2016). Lin's questions invite us to reflect on how we can cope with an immediate reality that may be virus free, but not anxiety free.

We shall meet again

Lockdowns will be slowly lifted in a (hopefully) not-so-distant future. We might be left with anxieties about new social rules, and fear about new pandemics (Hamblin, 2021). Months of physical distance have marked our bodies in significant ways: we might burn of desires to socialize, touch and hug again as some epidemiologists

have suggested, leading to a period of intense socialization similar to the “Roaring Twenties” (Mounk, 2020). However, the opposite might be true. Fear of contracting the virus might leave people with anxiety or what psychiatrists have defined as *Coronaphobia* (Arora et al., 2020). This has been a major concern for the creative industries, leading them to major investments in virtual infrastructure (Billock, 2021). Regardless of which scenario will self-realize, we will probably have to deal with a period of transition during which our bodies will constantly make us self-aware of our distances and will make us feel vulnerable when we are in a public space. Challenging our discomfort by finding new, safer way of socializing, of reclaiming public space, of making and celebrating art in the public might be the way we defeat the pandemic (and domesticate the virus).

Embracing the Viral?

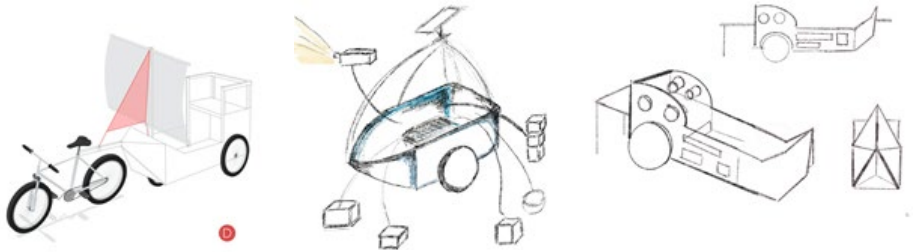
I am conflicted between a drive towards embracing the viral and an intense discomfort in practicing it. To be fair, the world has been in a state of profound instability even before the pandemic; we were already living in a condition of precarity, as labor relations were becoming increasingly uncertain, and climate change caused sudden extreme weather conditions everywhere. However, the pandemic has exacerbated these conditions, hitting the vulnerable the worst. In this situation, embracing the viral would not have the same significance for everybody. Thus, I am left wondering what would mean to create an environment that allowed new forms of re-socialization and artmaking in the most gentle and safe ways. In addition to cross the boundaries between disciplines and to overcome given categories, this new approach would have to take into consideration strategies to open up the enclosed spaces of the institution, the gallery, the school and re-engage with each other in the rich space which is the space of the city. This approach would also need to open up and transcend social boundaries, by inviting everybody in, by acknowledging and engaging with individuals, objects, architecture, and all living beings that populate our urban spaces. To repopulate the city does not have to mean to go back to past mobilities and transitions, but to break the rules.

A HUMBLE PROPOSAL

Imagine a gallery in a not-too-distant post-pandemic future. It doesn't sit in one space. Instead of cramming its artifacts into an enclosed space delimited by four walls, it moves easily across the city, carries around by a bicycle, or an electrical vehicle. The gallery brings artworks around for a stroll, making appropriate stops to allow the audience to engage with its flexible structure. Its design is modular, to allow curious visitors to pull its parts and inspect the artifacts from a safe distance, on their own, or in the company of friends and other passers-by. The gallery is equipped with a projector which can film on a screen or can illuminate the city by projecting directly against buildings.

This mobile artifact is not just a container: while its structure and (re)movable parts can be modified and adapted quickly to accommodate different artworks and abilities, its fluid, yet simple design does not stand out, but strives to complement

the urban texture of the city. The gallery has many functions: it may contain artifacts and specimens, documents and material objects, it carries sounds, images and animations. Its mobile nature and modular design makes it possible for people to experience it differently. The gallery seeks to open dialogues originating from what de la Cadena and Blaser call “sites of divergence”, that is, those elements of disagreements pertaining to what constitutes knowledge that “could not be solved without undoing what each of the groups were in relation to their interest in common” (Cadena & Blaser, 2018). Its aspiration in fact is to engage and create multiple dialogues between audiences with different education and disciplinary interests, and audiences with common interest but different approaches to life and the artistic field.



Images 4-5-6. Sketches of mobile gallery concepts and parts. © Courtesy of the author.



Images 7-8. Mockup of body of the mobile gallery prototype (photos by Roberta Buiani and Kavi)
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Would people stop by and admire the artworks it contains? Or would they be suspicious at the insufficient sanitation and physical distance it offers, fearing its exposure to numerous different environments? Would they take its passage as a way to rekindle human relationships with other strangers? Aren't the casual encounters this gallery will facilitate similar to when we queue for an Americano or for an all sold out show, or when we sit on a bench reading a book and conversing

with strangers? Importantly, could this be a way to recover trust in each other and start repopulating the city in a more respectful, sustainable way?

According to Maria Puig de la Bellacasa “The question of how we learn to live with others, being in the world, is an opening to ‘becoming with’ - to be touched as much as to actively touch” (María Puig de la Bellacasa, 2009) A mobile gallery can sit there in the middle of the main city square or unobtrusively visit different neighbourhoods without doing much and not offering much incentives for interaction. However, when it is able to suggest stories, to attract people, to meaningfully interact with the space around them, it suddenly becomes alive. Art has occupied public spaces for a long time. In fact, it is no news that planners and urbanists have been very interested in using the arts to intervene in urban space, not only for its economic value, but for its social and atmospheric value. However, as Peters argues, there is “a qualitative difference ... between Flaneuring and inhabiting a system we normally do not know from the inside” (Peters, 2017). In other words, it is only by experiencing, sensing and being able to explore with others that art can position itself in the realm of human interactions and social contexts.

Once can only imagine how a gallery can thrive in a post-pandemic era. However, we hope that this gallery will stimulate and activate a process of experiential collaboration, by turning it into an artwork in and on itself. By offering this artifact as a safe and inviting space, we hope to initiate new forms of re-socializations that do not wish to turn back the clock back to a pre-pandemic time, but to re-discover art, the city and its transformed surroundings as something new, vibrant and healing.

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Toward a Critique of Psychotic Realism

ABSTRACT

According to the Italian philosopher Mario Perniola, contemporary western society seems to be caught in the pincers between a sensological public realm allowing only for heteronomous thoughts and feelings and a privatism generated by mass communication and its imaginary fixations, that is, by an increasing foreclosure of the symbolic order thwarting any recourse to traditional ideological-critical discourse and attesting to a new regime of historicity generating artificial products defined as simulacra. This self-enclosed world of simulacra constitutes a world in which the antagonisms and conflicts characteristic of the symbolic order are no longer repressed or disavowed, but rather foreclosed, while generating at the same time dark phenomena that must be grasped as returns in the Real. This irruption of “psychotic realism” is traced by Perniola within the realm of contemporary artistic and aesthetic sensibility, that is, in artistic attempts to directly collapse the difference between art and the Real. However, psychotic realism in art and aesthetics might not only be endpoints of 20th century vitalism, but also represent failures to conceive the work-character of art.

KEYWORDS Sensology; mass communication; psychotic realism; abjection; art as remainder.

Mario Perniola's aesthetic thinking is not reducible to traditional aesthetic reflections upon art but rather sets out to survey and analyse the collective structures by which experience in contemporary western society has been construed, partitioned, distributed, and challenged. But what kind of collective experience lies at its heart? According to Perniola, it is constituted by a "process of reciprocal osmosis between man and things, with the result that the former has become similar to the latter, while the latter have assumed increasingly human characteristics" (Perniola, 1995: 44). In other words, contemporary experience is characterised by an inversion in the relationship between humans and things, between the organic and the inorganic world. This inversion has not only affected knowledge, belief, and action, but above all feeling. That is to say: "On the one hand, things are now able to feel in our stead; on the other, we are being subjected to a process of reification more radical and profound than anything we have known in the past, for it strikes at the most immediate and intimate aspect of existence" (Perniola, 1995: 45). This radical and profound experience of reification marks a shift regarding feeling in that the latter is no longer accountable in terms of some interior experience of the modern subject, but rather must be grasped in its utter externality; moreover, this delegation of feeling from humans to things indicates that the traditional distinction between organic and inorganic existence has collapsed, and that the human being has become a "thing that feels" (Perniola, 1995: 29). On the one hand, contemporary socio-historical reality could be conceived as the ultimate manifestation of the process of alienation described by Karl Marx; on the other hand, what renders this alienation most profound and sets it apart from more traditional experiences and accounts of alienation is not simply the fact that alienation has encroached upon feeling, that is, "the whole field of sensibility and emotion" (Perniola, 1995: 29), but that it has even resulted in the establishment of a "sensory horizon that is both collective and socialized" (Perniola, 1995: 28).

Perniola traces the emergence of this collective and socialized sensory horizon in the context of the video (and audio) culture of the late 1960s and 1970s (Nam June Paik and Bill Viola) and specifies that, due to this alienating sensory horizon, feeling is encountered as something "already-felt" (Perniola, 1995: 28). This already-felt as the a-priori condition of sentient experience functions at the same time as the new site of contemporary trans-subjective and impersonal power, and this amalgamation of structures of power and of feeling has transformed objects, individuals, and events into figures of the already-felt taking possession of humans by means of its pre-determined sensorial and emotional totality. Furthermore, while that which was to be felt or sensed previously could either be felt and sensed or not, the already-felt can only be "traced", and it represents a significant historical turn that seems to remove humans from both feeling and non-feeling, "from sensibility or non-sensibility, from effort, exertion, responsibility, attentiveness, decision, participation" (Perniola, 2002: 4). That is, feeling "has assumed a dimension that is to be traced in an anonymous, impersonal, and socialised manner" (Perniola, 2002: 4-5).

The quasi-transcendental schematic status of the already-felt is defined by Perniola as “sensology” (Perniola, 2002: 5). Sensology is addressed to the social collective like an immediate imperative to trace and copy that which has already been tried and approved. Furthermore, sensology as totality of prefabricated patterns of sentient experience constitutes not only a kind of “mediacracy” designating the transition of the mediating activity of thought to feeling and the transfer of the rule of feeling, sensibility, and affectivity from human beings to impersonal devices and apparatuses, but it also contains a specular structure opening the possibility of sensing oneself as a site in which “the exterior is mirrored” and sentient experience is transposed “into what we let mirror, touch, and echo”, while a “surrogate and subsequent feeling” would pass into our possession “as reflection, reworking and echo of the first one” (Perniola, 2002: 11). Considering this constellation of sensology, mediacracy and specularism conditioning the possibility or impossibility of sentient experience today, contemporary socio-historical reality seems to have turned into a self-enclosed totality that contains not only all possible already-felt sensibilities and emotions that ultimately can merely be accepted and repeated and mirrored (Perniola, 2002: 18).

Contemporary socio-historical reality is, however, not only sensological but it is simultaneously permeated by the omnipresence of mass communication. Perniola describes its omnipresence permeating all areas of contemporary western society in the following manner: “It is the magic wand that ... replaces education and instruction with *edutainment*, politics and information with *infotainment*, and art and culture with *entertainment*” (Perniola, 2004: 5-6). Moreover, it pretends to address its audience in an immediate and direct manner and gives itself the veneer that is best rendered as “*democratainment*” (Perniola, 2004: 6). In contrast to sensology that still grants a certain degree of consistency and certainty, mass communication operates in such a way that it evokes oppositions, antagonisms, conflicts only to dissolve them into simulacra. The violence of mass communication also exhibits the tendency to subject the public to the private by violently inserting the individual into the image of the world, thereby reducing the public realm to a mere performative space for the individual (Perniola, 2004: 15-16). Since its central notions are the notions of immediacy, spontaneity, and instantaneity, mass communication transports and proliferates a type of quasi-totalitarian vitalism that does not register any differences, expels the experience of antagonism and is thus captive of imaginary fixations and the psychotic effect resulting from the foreclosure of the symbolic realm (Perniola, 2004: 34). This foreclosure of the symbolic realm has also consequences for the idea of history, since mass communication carries within it a new form of historicity that registers historical events no longer in either tragic or progressive terms, but rather in terms of trauma and/or miracle (Vogt, 2019: 69-77), and the ever-faster exchange or oscillation between historical events perceived as miracles or traumas leads not only to their equivalence and ultimate indistinction, but also manifests a problematic increasing societal and individual dependence

on traumas and miracles that have grown in intensity and in destructive force (Perniola, 2011: 190-193). What is more, mass communication's new regime of historicity also brings about transitions from "art to communication ... from porn to snuff" (Perniola, 2011: 197), from literature, film, video to snuff literature, snuff films, snuff videos (Virilio, 2003: 56-57), and its thoroughly artificial nature or violent hyper-nature requires an "excessive reality" obsessively breaking the remaining taboos (Perniola, 2011: 197) so that it can be believed and accepted again and again.

Contemporary sensological and mass communicative society is accompanied by phenomena that must be grasped as different versions of a return in the Real. In this context, Perniola is primarily interested in "psychotic realism", that is, in a mode of (artistic) sensibility that "has taken shape as a veritable irruption of the real in the rarefied and highly symbolic world of art" (Perniola, 2004a: 3). Its typical focus lies "on the most violent and raw aspects of reality" (Perniola, 2004a: 4), and it is often fixated on the themes of pornographic hypersexuality, hyperviolence, cruelty, trauma, destruction, disfigurement, terror, extinction, death. What is more, psychotic realism, which is akin to Hal Foster's "traumatic realism" (Foster, 1996: 152), attempts to render raw and hyperviolent events without any recourse to symbolic mediation, thereby hoping to elicit an experience "where repulsion and attraction, fear and desire, pain and pleasure, refusal and complicity are mixed and mingled" (Perniola, 2004a: 4). The artistic staging of an encounter with the Real devoid of any symbolic mediation leads not only to a mortification of the existent but generates also "the ambivalent and ambiguous experience of disgust" that, elevated to the central category of psychotic realism, betrays a problematic proximity to vitalism that rages not in the display of both disgusting physical phenomena and of "an exaggerated and abnormal organic vitality that swells and spreads beyond any boundary and any form, and circulates by homogenizing everything in a formless and putrid mass" (Perniola, 2004a: 6; 8). Psychotic realism is therefore not only indicative of the attempted collapse of any structure of mediation between art and the Real but is also often accompanied by a shift toward bodies "engaged in dangerous experiments" (Perniola, 2004a: 23). Examples of extreme body art can be found in performance art (by Marcel Li Antunez Roca, Orlan or Stelarc), but also in movies and videos that have brought "the poetics of reproduction of a real phenomenon caught in the moment in which it occurs ... to its extreme consequences" (Perniola, 2004a: 23). But the cinematic variations on psychotic realism also expose the latter's limitations. That is to say: "In the first place, it is difficult to consider the *business* of brute reproduction of the crudest realities (sex, extreme violence, death) a manifestation of difference. One can hardly deny that *gore*, *splatter*, *trash* constitute a banal version of experiences that are actually known by only a few" (Perniola, 2004a: 23). On the other hand, they can no longer provide "any guarantee that what we are witnessing is true. In fact, the possibility exists of manipulating any visual document electronically. Thus, the reality effect that constituted the main cause of excitement of this type

of product is lacking” (Perniola, 2004a: 23). The most problematic aspect of psychotic realism consists, however, in its idolization of abjection, for abjection must be recognized not only as symptom of vitalism and its incapacity to render difference, but even as “absolute hostility toward the world and the human body considered as evil” (Perniola, 2004a: 24). Ultimately, psychotic realism as experience fetishizing abjection reduces the corporeality of the human being to thrash or “garbage” and “this means that the only one to shine is the transcendental” (Perniola, 2004a: 24). Perniola reproaches psychotic realism and its vitalist inclination for its idolization of abjection in that its recuperation of objects as objects is tantamount to a problematic conception of aesthetics and art sacrificing the issue of formal artistic dynamics to a one-dimensional semantics of content. The combination of immediate presentation of and fixation on crude and disgusting materials produces a certain banality so that, for instance, the proliferation of bodily products - bodily secretions, excrements - in/as art by artists such as Mike Kelley and Paul McCarthy testifies to the ultimate harmlessness of their artistic practices. Even though artistic work on corpses and putrescent material make a claim to transgressing traditional aesthetic norms, it often generates the opposite effect, that is, not simply the effect of disgust, but rather the paradoxical contemplation of harmonious beauty, thereby unwittingly confirming a quasi-classical aesthetics. Ultimately, disgust as maximal countervalue to classical beauty and as supposedly strongest anti-aesthetic affect continues to be subject to a problematic metaphysical idealisation of form. It is for this reason that one can justifiably speak of the “conformism of abjection” (Virilio, 2003: 37). This conformism of abjection elevating biology to a “major art” (Virilio, 2003: 55) is accompanied by an “academicism of horror” representing nothing but the “inverted image of *sacred art*” (Virilio, 2003: 45). Moreover, the conformism of abject art mirrors certain features of the contemporary cultural-economic apparatus that, under the competitive conditions of late capitalism, can only reproduce itself by generating ever-stronger shock products and shock effects. These shock products and effects, accompanied by the production of objects and commodities whose destiny is the immediate realisation and valorisation as trash, no longer constitute provocations but are produced by the apparatus itself as different versions of inherent transgression (Žižek, 2000: 26). What is more, the prevalence of abject art points also to an impasse regarding the process of sublimation in that the matrix of sublimation, that is, the gap between the “empty place and the positive object” has been increasingly threatened (Žižek, 2000: 26-27).

Against the vitalist distortion of the Real, Perniola attempts, in the wake of Jacques Lacan and Clément Rosset (Perniola, 2004a: 8-9), to elaborate and elucidate contours of the Real of art keeping equidistance to both fashion and mass communication by insisting on the “stony and rough character” shared by Lacan’s and by Rosset’s respective accounts of the Real and by art’s kernel consisting in the work-character of art, that is, “in its radical extraneity, in its irreducibility to a single identity, in its essential enigmatic character” (Perniola,

2004a: 11). Consequently, it can be claimed that the reason as to why art cannot be dissolved into either fashion or mass communication is its “incommunicable nucleus which is the source of an infinity of interpretations. Under this aspect, it is similar to the real with which it shares the harsh and rocky inconvenience” (Perniola, 2004a: 11-12). This incommunicable and inaccessible nucleus of art can be approached via Lacan’s notion of the *objet petit a* that the psychotic realism of “today’s art claims to have reached” (Perniol, 2004: 12). It is by means of the *objet petit a* that the Real of/in art discloses itself as *splendour*, *ágalma*, *semblance* (Perniola, 2004a: 12), and its status as “extimate” object suspending the simple opposition between inside and outside becomes significant in the context of a different reading of psychotic realism in that it conveys to aesthetics and art some “extreme beauty” by traversing and sublimating the contemporary sensological and mass communicative world.

Hence, Perniola seems to give priority to a conception of art that sets itself apart from both abject art and the products of mass culture. Although it is imperative to traverse the paradises and hells of mass culture and to register the images and affective consequences of fashion, cinema, cyberspace, advertising etc., art alone seems to possess the capacity to establish essential relations to the Real that elude mass culture. If art is not to be ceded to vitalism, it must not be dissolved into direct invocations of the Real or into fashion and mass communication. In other words, one must insist once more on the work character of art: “In fact, if there is a difficulty in art, it must not be sought in the subject, in the artist, or in his desire to express himself and communicate, but in the work” (Perniola, 2004a: 11). Art’s idiosyncrasy consists in its opaque, impenetrable, and enigmatic essence. It is in opposition to the flow of mass communication prescribing homogenisation, conformity, mass consensus, and performativity by means of its constitutive non-identity that Perniola conceives art as remainder (Perniola, 2004a: 65). But this notion of the remainder must be freed from those negative connotations that have falsely been ascribed to it by both situationists and concept artists due to their shared vitalist and subjectivist misconceptions. Perniola’s interpretation of art as remainder is directed expressly against conceptions of art that see the activity of the artist as the essence of art and reduce the work of art to the status of a physical residue overshadowing the activity of the artist (Perniola, 2004a: 60). This conception of art can be found in concept artists such as Joseph Kosuth who restricts the artwork to the representation and tautological attestation of the artistic intention in question. On the other hand, Perniola turns also against the institutional theory of art elaborated by George Dickie. Although it rejects both a metaphysical essentialism of art and an emphasis on the activity of the artist, it ultimately “constitutes a kind of middle way” that mirrors not much more than the societal status quo by simply presupposing “a minimum of sociability” and even the existence “of a public” (Perniola, 2004a: 61; 62) - a presupposition that simply can no longer be taken for granted. Both concept art and the institutional theory of art claim an identity of art that is without remainder and thus ends up

in tautological assertions. That is, while the tautological operation of concept art is supported by the ideal of transparency, the tautological character of the institutional theory of art consists in the “tendency to level art on the existent, conferring upon it an institutional character” (Perniola, 2004: 62). While concept art is characterized by a logical tautology, the institutional theory of art is subject to a different tautology, that of “social circularity between art, artists, and the world of art, each referring to the other. Even in this case there is no residue” (Perniola, 2004a: 62)!

It is only an approach to art that inscribes the notion of remainder into a constellation with “the idea of stability, steadiness and resistance” (Perniola, 2004a: 66) that is capable of restoring the “greatness and dignity” of art in the age of nihilism, that is, in an age in which the melancholic reaction to the disappearance of metaphysical values formerly associated with art has led to “a feeling of profound self-inadequacy that turns to self-denigration and abjection”, as well as to “the inability of believing anyone else worthy of esteem and admiration” (Perniola, 2004a: 67). However, this restorative attempt must not be mistaken for a rehabilitation of the artwork in monumental terms; rather, “the notion of *remainder* is an anti-monumental and anti-classical position” (Perniola, 2004a: 66). In other words, art no longer submits to the imperative of harmony and reconciliation but affirms instead its own internal conflicts and antagonisms: “If art is *remainder*, it means that the whole does not hold, does not stand, but breaks up in asymmetrical elements, deeply discordant among each other” (Perniola, 2004a: 66). Perniola’s anti-monumental, anti-classical and resistant conception of art as remainder opposes therefore not only practices that strive for the dissolution of art into the vitalism of fashion and of mass communication, but also theories that grasp art in terms of an autonomous and definite identity. Both the account of art as autonomous entity and the account of art as vitalist manifestation ignore the “*shadow* that inevitably accompanies the work” (Perniola, 2004a: xvi). The shadow accompanying the artwork does not, however, constitute some negativity propelling the engine of dialectics and its *telos* of harmony and reconciliation. On the contrary, the shadow “remains extraneous and different. It is not the element of a more complex harmony, or the moment of a dialectic process that thrives on contradiction” (Perniola, 2004a: xviii). Consequently, Perniola’s conception of art and artwork occupies something like the middle ground between a modernist aesthetics of autonomy recognizing in the - either consonant or dissonant - form of the artwork an unbridgeable and therefore resistant distance to the forms of societal life, and an aesthetics that aims at the abolition of the separation of art from society. One could perhaps claim that art, constitutes, for Perniola, a sensorium, an aesthetic mode of being that is different from the sensological, mass communicative, consensual forms of sentient experience.

Perniola’s notion of the fundamental non-identity of art, that is, of art supplemented by the shadow, is condensed into the image of the crypt that “preserves as if it were dead something that it is still living and secretly working”

(Perniola, 2004a: 68). Two features of the crypt are decisive: On the one hand, the loss preserved in the crypt can neither be known nor communicated; this “artificial unconscious” demonstrates that the crypt is a remainder, “understood not as residue, but as psychic reality, ‘reality block’” (Perniola, 2004a: 69). On the other hand, the crypt is a space “that can be defined as internal and external at the same time”, that is, “as ‘intestine exclusion’” or “‘clandestine inclusion’” (Perniola, 2004a: 69). The crypt marks the place in which art can be lodged to protect it from the processes of normalisation and standardisation typical of mass communication, so that art can figure as “a kind of realized utopia” or as “a hidden treasure that shines only in the dark” (Perniola, 2004a: 69). But, finally, what might be the meaning of art as “a kind of realised utopia”? Perhaps, art’s realised utopia consists in art’s capacity to preserve an experience of the thing that does not reduce the thing to an object, commodity, instrument or means. Perhaps, art preserves an experience of the thing in which the thing is not subjected to the imperative of utility and instrumentality. Art points up “our ignorance and contempt for things” and that “we are doing violence to the thing” and that “we prevent it from showing and giving itself completely” (Perniola, 2004b: 109). Art as “hidden treasure that shines only in the dark” implies neither a movement of transcendence nor that of transgression, but rather revolves around an experience of difference that arises from the things themselves preserved in art and that “requires a certain protection and safeguard, as well as prudence and discretion on the part of those who would like to enjoy them” (Perniola, 2004a: xviii).

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“Naku”: A Performance with a Rapper in an Anechoic Chamber

ABSTRACT

Naku is a performance with a rapper in an anechoic chamber. It is a part of our ongoing study about anechoic chambers being a contact point of two cultures. An anechoic chamber is designed to absorb echoes, thus making it an echo-free space. To examine an account narrated by John Cage, we focused on ‘orality,’ which is the oral character of the language. Instead of “reading” a text, we directly extracted sound (i.e., voice) from thought itself in a rapper’s freestyle performance. We observed two losses in sound: interference and dynamics. These made us aware that the oral creations in freestyle are not done only by the internal body functions of the subject (i.e., the rapper) and adjusted by conflicts of the site of the performance. Thus, the voice in an anechoic chamber provided us with the opportunity to review the orality, the tale, and the site itself.

Acknowledgements

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KEYWORDS Anechoic chamber, Rap, Orality, Two cultures.

INTRODUCTION

Naku is a performance with a rapper in an anechoic chamber. It is a part of our ongoing study about anechoic chambers being a contact point of two cultures (Snow, 1959). In 1959, Charles P. Snow identified a split in Western society's intellectual life into two polar groups, namely literary intellectuals and scientists. After a half a century, this division still dominates our society and creates numerous problems that go far beyond any single discipline. Few exceptions overcame this division by providing access to the technical world for artists (Klüver, 1969), enabling artists and researchers to engage in wet biology practices (Catts, 2001), and exploring the creative and expressive nature of computational approaches to art and design (SFPC). Our attempt is in line with these exceptions wherein we chose an anechoic chamber as the site where different disciplines could meet.

ANECHOIC CHAMBER

An anechoic chamber is designed to absorb echoes, thus making it an echo-free space (Beranek, 1946). It is devoid of reflecting surfaces found only in open spaces that are a thousand or more feet above the earth. It enables testing a sound source located at a distance of approximately 20 to 30 feet, instead of several hundred feet in free space, without creating a public nuisance.

The following is an account of an anechoic chamber: "For certain engineering purposes, it is desirable to have as silent a situation as possible. Such a room is called an anechoic chamber, its six walls made of special material, a room without echoes. I entered one at Harvard University several years ago and heard two sounds, one high and one low. When I described them to the engineer in charge, he informed me that the high one was my nervous system in operation, the low one my blood in circulation" (Cage, 1961).

However, this account seems doubtful. As Kahn noted, the anechoic chamber was the technological emblem of "Cagean" lore (Kahn, 1997). Listening to two internal sounds is difficult, at least given our own experiences in an anechoic chamber. Instead of blindly following this Cagean tale, we focused on external sounds in our study. We intended to embody "the relationship between sound as an object's vibration, its space, and the events that occur therein" (Hatanaka, 2003). As our first attempt, we chose a sound from the internal body (i.e., voice) for the performance. We shift a "dead acoustic and depopulated space" with an experiential and scientific legitimization to a site for aesthetic practices. To alternate a phrase from Kahn, we externalized the sound as music for the rest of the world.

ORALITY

"Naku" was performed by the rapper Tamaki Roy (環ROY) in collaboration with other practitioners. He works across several fields along with hip-hop, such as contemporary dance (<http://shimaji.jp/arika/en/>) and picture books (<https://www.bronze.co.jp/books/9784893096821/>). We investigated how the voice, an improvisational and transitory thing that comes directly from the human body,

can be listened to or made to be listened to in unique acoustics. In other words, we concentrated on “orality (Ong, 1982),” the oral character of the language. Rather than comparing orality and writing, we will focus on the fact that language is an oral phenomenon, and clarify its ‘primary’ without any amplifications (i.e., microphones and speakers).

Instead of “reading” a text, sound (i.e., voice) was directly extracted from thought itself in a rapper’s freestyle performance. The sound represents primary orality with its absence of echo or amplification. We did not focus on written words as residue that tyrannically locks into a visual field forever, but on oral creations with “its power, its beauty, its dangers”.

PERFORMANCE

The performance is held in an anechoic chamber at the Ohashi-campus, Kyushu University, Japan. The anechoic chamber (4.3m * 5.3m * 4.5m) is situated in a building’s ground floor. Before our experiment, the site was used for diverse scientific topics, including acoustic transmission, psychoacoustics, and noise control. It was hardly used for aesthetic purposes, such as performances, or exhibitions.



Image 1. Performance. © Courtesy of the authors.

As Hatanaka noted, “It is impossible to consider sound apart from the space in which it is heard.” However, we are often unaware that there is a secondary sound called echoes in the space. At the site, we separate the second one from the primary to encourage us to focus on the sound itself.

The rapper was alone at the site, and all lights were turned off for half an hour. He lays in the middle of the room, with minimal muscle movements to externalize his thoughts as an oral phenomenon in freestyle. This was recorded using an Ambisonics microphone (Soundfield-SPS200) suspended from the ceiling at the center of the site.

DISCUSSION

Instead of the two internal sounds reported by Cage, with the sound from the internal body, we observed two losses in the performance: interference and dynamics. In our daily situation, it is difficult to be away from reflecting surfaces that create echoes. The echoes could create various aesthetical effects from sound sculptures in traditional gardens (e.g., Suikinkutsu, Shishi-Odoshi), or through a church choir for recording purposes. However, echoes sometimes interfere with our cognition as well.

The Speechjammer (Kurihara, 2012) is a typical example. The system interferes speech by providing the speaker's utterance at a delay of a few hundred milliseconds as Delayed Auditory Feedback (DAF) (Yates, 1963). With DAF, the speaker faces several difficulties in voicing, such as prolongation of vowels, repetition of consonants, increased intensity of utterance, and other articulatory changes. The performance is the opposite—the absence of echoes smoothens the rate of a rap that emanates directly from the rapper's body. Non-reflective surfaces also render controlling the dynamics of vocal intensity (i.e., sound pressure level) unnecessary. Disappearance of external feedback invalidates the need for a loud voice.

Here is the introspection of the rapper for the performance:

“I don't feel like shouting at all. I feel like I'm wasting my energy, and I feel like I'm wasting my time, and I feel like I should just whisper. However, when I listened to the recorded sound, I found that large and small spatial dynamics were recorded properly. That was very strange to me. But the subject is indeed manipulating the dynamics put into the vocalization, making it smaller or larger, so the recorded results of such heat changes are natural. (...)

In other words, if there is no echo, the vocalizing subject cannot understand the dynamics of the sound. (...) The volume of voice is not adjusted only by the intrinsic bodily functions of the subject but also by the conflict with the environment. In an anechoic space, this is no longer a valid conflict. Therefore we are forced to speak only empirically, which makes us feel very uncomfortable.”

The rapper also states a sense of separation between thought and body with the two losses. In his words:

“In an anechoic chamber, it's hard to get excited. But that's not the right way to put it, and it's more like my body doesn't feel excited. (...) My thoughts were excited because there was no interference. There are moments when my thoughts are driven and excited. But physically, it's not quite as exciting”.

Because of the disappearance of echoes, we have noticed that the role of the site as a contact point of thought and body not from the audience but a performer's point of view. The result indicates that echo could be noise for the thought of performer (at least rapper in freestyle) and the role of the noise for the body in performance.

As a start point of our ongoing study, we explore what happens when a rapper performs in an anechoic chamber. The two losses in the performance depict the exterior of Cage's tale that we could not clarify (or at least was challenging to define) with songs with lyrics given in advance or with performances of instruments made on the premise that there are echoes. The aesthetical character of echo-free with the primary orality of sound (i.e., a voice without amplification) points to a glimpse of the site where two cultures meet.

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Tracing Silence: Ecocide & Omnicide

ABSTRACT

*Und wenn du lange in einen Abgrund blickst,
blickt der Abgrund auch in dich hinein.*
Nietzsche, Beyond good and Evil 1886

In the words of the ancient Chinese proverb, *May you live in interesting times!* It would appear that we do — a time in which centuries of accumulative environmental degradation is rapidly forming a confluence driven the exponential growth in human population and resource consumption, leading towards what may be considered to be the end-game of global capital. As Nietzsche suggests — *and when you gaze long into an abyss the abyss also gazes into thee*. This paper examines of socio-political forces as they effect the complex balance of global environmental systems and the consequent macro scale counter-reactions in biological, ecological and climatic spheres. This theme will be achieved not by a conventional statistical or economic analysis but through metaphor — by the examination of the two of the author's creative works: *Silent Forest* (1996) and *Supereste ut Pugnatis (Pugnatis) ut Supereste* (2013) (Helyer 2005; 2013).

KEYWORDS Art and science, art and biology, art and politics, sculpture, installation.

INTRODUCTION

These two projects, *Silent Forest* (1996) and *Supereste ut Pugnatis* (*Pugnatis*) *ut Supereste* (2013), whilst differing radically in their methodology and physical structure both critique the accelerating drive towards a planetary ecocide (or omnicide) a catastrophe that has been unfolding for several centuries that operates across all sectors of human endeavour, the sum total of which interact to accelerate environmental instability.

Both projects come from a series of works that consider historical, ideological and ecological sites of silence and silencing. The works address the negative spaces generated by political and cultural forces, in the belief that it is within these inarticulate voids, in the shadows and empty spaces that we are able to glimpse the massive contradictions of our economic and aesthetic realities. Whilst *Silent Forest* proposes a deep and attentive listening to the abyss of environmental and political silence — *Supereste ut Pugnatis* (*Pugnatis*) *ut Supereste* requires that we listen critically to the double-speak of border control, and a distorted biology of ethnicity as a tool of exclusion.

EXHIBIT A - SILENT FOREST

The massive fifty-two speaker array of *Silent Forest* made its debut at the San Francisco Art Institute gallery as a feature of *SoundCulture 1996* and is now in the collection of the National Gallery of Victoria (Melbourne, Australia). As part of the *silent-series* of works that engage with the metaphor of silence — it counters urban stereotypes that romantically associate the natural world with tranquillity and the general absence of sound. In contrast the *silent-series* recognises that living systems constantly generate sound and that in this context silence is equated with dysfunction and the negation of life.

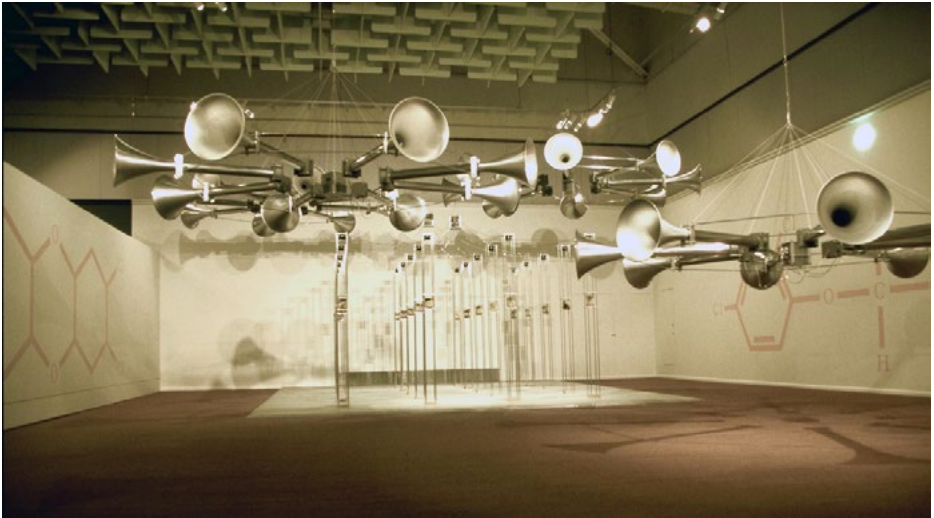


Image 1. Silent Forest at the San Francisco Art Institute during SoundCulture 1996 © Nigel Helyer

Silent Forest proposes that we listen to a cluster of silences decreed by political and military power and as such, is itself, constructed as a tracing of colonial and neo-colonial relationships that link cultural form with political force. The installation, together with its accompanying radio broadcast, weave a sonic web between a natural environment under chemical siege and the High culture of Western Opera.

Conceptually *Silent Forest* developed from fieldwork in Vietnam and follows a trail of silence and silencing attached to two principal sites. Number one, the Hà Nội Opera House (Nhà hát lớn Hà Nội) built by the French colonial government between 1901 and 1911, which functioned as a significant factor in the silencing of traditional Vietnamese culture. Whilst his grandiose structure was designed to accommodate the entire francophone population of Indochina (the original French name for Vietnam) no Vietnamese musicians or traditional music were permitted; over-ruled and overlaid by European high-art music.



Image 2. Reproduction of a postcard showing the newly built Hà Nội Opera House (Municipal Theatre) © Public domain

The leitmotiv of the Opera House is extended in the project by a direct sculptural reference to the large carousel of air-raid megaphones mounted on its roof by the next wave of colonial occupiers, the Japanese Imperial Army, during World War Two — this intersection of cultural and military sound offers a perfect symbol of soft and hard political power. These references are further amplified by the use of the Opera House in 1945~46 by the Viet Minh (the National Liberation Front), the Viet Bac (the Liberation Army) and the newly

formed National Assembly which, with Ho Chi Minh at the helm, formed the constitution of the Democratic Republic of Vietnam in November 1946. Perhaps the final irony is that the colonial impetus has come full-circle — the Opera House was restored to its former glory in preparation for the International Francophonie conference held in 1997 with French government aid (not to mention a new international hotel).

As Gisele Bousquet notes “French leaders wished to use the conference to reclaim France’s importance to its former colonies and to affirm French centrality in the Francophone Community....This was not a matter of colonial nostalgia on the part of France. Rather the French sought to use historical, linguistic and cultural ties as a way to challenge the expansion of anglophone global culture, which France sees as a threat to its own international power and influence” (Bousquet, 2002: 421).



Image 3. Operation Ranch-hand © Public domain

The second trail leads to the jungle areas devastated and literally silenced during the American War by Agent Orange defoliant in *Operation Ranch-hand*. As a counterpoint to the physical form of the four large, suspended carousels of megaphones with their mix of musical fragments, the forest — an allusion to the five million acres that comprise the *Land of the Dead*, is represented by a grid-work of twenty slender towers, each supporting a glass chemical flask

containing a dysfunctional bonsai arrangement, drowned in a viscous fluid. These also allude to traditional Vietnamese Temples, the forecourts of which frequently house large-scale bonsai arrangements — a celebration of wild nature embraced and revered as a distinctly Asian aesthetic.



Image 4. Silent Forest (detail of Bonsai) © Nigel Helyer

Topped by hidden speakers the forest towers relay, not the whispering of foliage, nor the rustling of a myriad of forest creatures — here the forest is reproduced from the surface noise of early archival 78 r.p.m. field recordings. The arrow of time is resolute — the loss, silence or absence evoked by such a sonic inversion is manifold. In reality many of the animals and habitats preserved on these recordings no longer exist — indeed what is lost forever in the biosphere is mirrored by the extinction of the recording and storage technologies themselves. We might consider analogue, disk based recordings as an endangered species, which are in effect silenced, inundated by their own surface noise and relegated to the margins by the hygiene of digital fetishism.

EXHIBIT B - *Supereste ut Pugnatis (Pugnatis) ut Supereste*

Whilst the two works are separated by some seventeen years and are radically divergent in sculptural form, they share many of my concerns with the history of power and control and concepts of silence and silencing, concepts that embrace both biology and language.

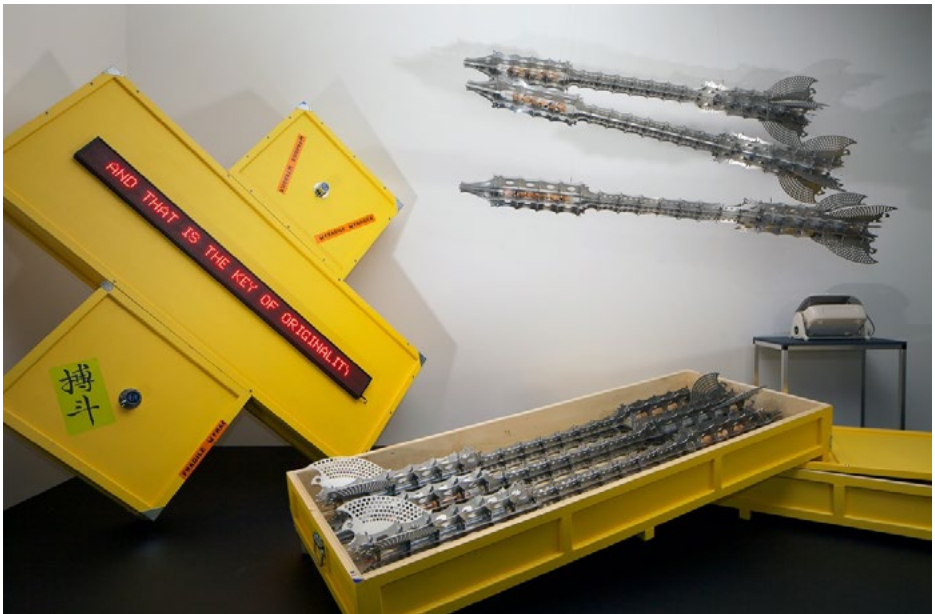


Image 5. *Supereste ut Pugnatis (Pugnatis) ut Supereste*
At the PowerHouse Museum, ISEA 2013 © Ian Hobbs

The back-story that links *Silent Forest* with *SPPS* is the origin of Agent Orange itself. Contrary to conventional wisdom it was not the Pentagon who devised the chemical defoliants (Agents: Orange, Orange I; Orange II; Orange II; Super Orange; Green; Blue; Pink; Purple and White; etc) neither did they

develop the now familiar guerrilla warfare strategies of *Hearts and Minds*; the resettlement into *New Villages* (internment camps) or *Search and Destroy* tactics. These were all bought off-the-shelf in a made-to-measure form, supplied by the British Military and their Chemical Warfare Establishment at Porton Down. Between 1948 to 1960 the British waged a campaign against Malaysian Communist insurgents with tactics that sought to deny them with food supplies. British strategies centred around the destruction of farmlands and forests with air-borne defoliants, the widespread killing of livestock and the re-settlement of entire communities.

Supereste ut Pugnatis (Fight to Live) was the motto of the Chemical Defence Establishment and is the metaphorical banner of a work developed for the *SemiPermeable+* exhibition mounted by SymbioticA at the PowerHouse Museum, Sydney as part of ISEA2013. The work examines the intersection between the Visual Arts and Bio-Sciences and focusses upon the development of metaphors that address the membrane in biology, politics and culture.

We are defined, structured and bounded by membranes, selective barriers that function at a molecular level within our bodies and operate at the macro scale as the socio-political boundaries that confine and control our behaviour.



Image 6. The Artist infecting eggs in the lab © Nigel Helyer



Image 7. *Supereste ut Pugnatis (Pugnatis) ut Supereste*, detail of infected payload © Nigel Helyer

My French raincoat, which is a membrane of sorts, bears the legend *Impermeable*, but I can assure you it is not, as like most membranes worth their salt, it is semi-permeable! Membranes are selectively permeable structures, controlling the exchange of ions in our synapses, transforming photons into carbohydrates in plants, acting as the meniscus of the world ocean, trading gasses with the atmosphere and regulating our climate.

Manifest in the form of an architecture of power, a membrane becomes the portcullis and drawbridge regulating access to a Norman Castle; a filter of economic privilege to the VIP lounge and the algorithm that structures the flow of surveillance information at airport security. It is the tissue of legal language describing the socio-economic pressure valve that transported the poor and disaffected to Australia in a risible attempt to rid England of its criminal class; and the tongue twisters that policed the White Australia Policy designed to exclude people of colour and Asians.

Supereste ut Pugnatis (Pugnatis) ut Supereste is designed to drift in these interstitial spaces between biology, politics, culture and history constantly recalling the functional significance of the membrane as border, as a cultural and linguistic filter, as a generator of difference. The work is offered as an omniseual bacterium ingesting histories and narratives that associate through a labyrinth of metaphorical bonds, some feint and tenuous, others powerful and

robust. A sonic sculpture illuminated by canary yellow, the yellow of egg yolk, the pallor of yellow fever, the threatening tide of the yellow races, the warning yellow flag of quarantine and contagion and more prosaically the globalised yellow of international art crates. Take a journey down any of these wormholes to discover a centripetal force that pulls back to the centre of this nexus.

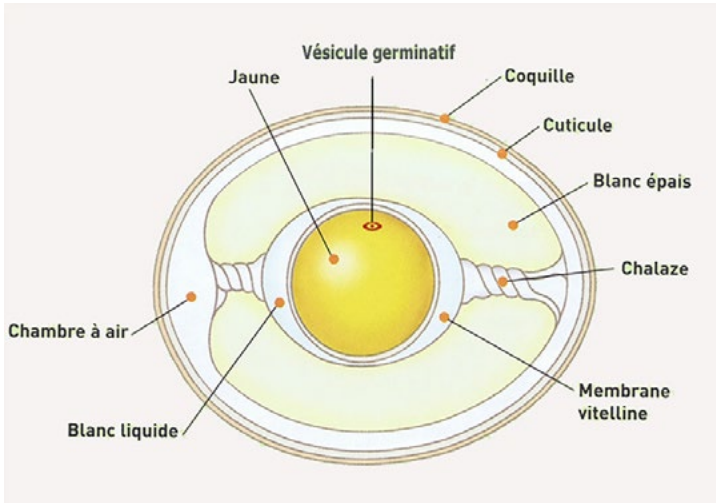


Image 8. Diagram of an egg © Public domain

SPPS makes more than a nod towards the form and function of antique Chinese gunpowder rocketry and *The Fire Drake Manual*, a 14th Century Chinese military treatise edited by Jiao Yu and Lui Ji, which details the evolution of rocketry circa C10th. These early rockets were capable of carrying payloads of poisonous and infected biological material, launched over enemy lines and into civilian populations sheltering under siege - a preview perhaps for the xenophobe associating the idea of China with contamination. Here the sculptural form is hybridised with the physical structure of the Bacteriophage, a viral entity that pierces the membrane of a host Bacteria, injecting its DNA and commandeering the genetic machinery of the Bacteria to replicate itself ~ and all of this done without an entry permit!

In SPPS the payload of the mutant rocket forms, glass cylinders containing infected eggs offer an ironic homage that reprises the origins of modern bio-warfare research, where chicken eggs were the bio-reactor of choice at the Chemical Defence Establishment at Porton Down where in 1940 biological warfare work began in the highly secret autonomous group called Biology Department Porton (now known as the Chemical and Biological Defence Establishment) near Salisbury UK using some twenty thousand military 'volunteers' as guinea-pigs.

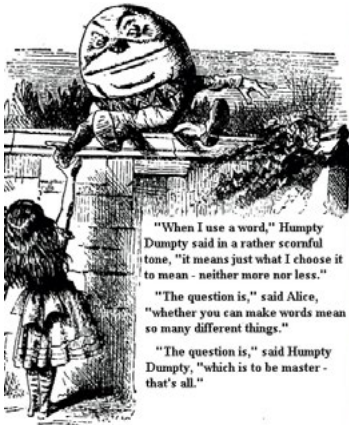
Such work was paralleled by the Soviet Bio-warfare programme that began in the 1920's at the Leningrad Military Academy and by the US Army, Gas Service Section established in 1917. Symbolically the egg functions to project life into the future, it is literally a vehicle for transmitting and maintaining the continuance of life but here it is usurped — weaponised as a vehicle to deflect and deter life.

“Humpty Dumpty sat on a wall
Humpty Dumpty had a great fall
All the Kings horses
And all the Kings men
Couldn't put Humpty Dumpty Together again.”

“When I use a word” Humpty Dumpty said in a rather scornful tone, “it means just what I choose it to mean — neither more nor less.” — “The question is,” said Alice, ‘whether you can make words mean so many different things.’ — “the question is,” said Humpty Dumpty, “which is to be master — that's all.” (Caroll, 1865).



Image 9. British servicemen as guinea-pigs and Vietnamese women traversing the Land of the Dead © Public domain



"When I use a word," Humpty Dumpty said in a rather scornful tone, "it means just what I choose it to mean – neither more nor less."
 "The question is," said Alice, "whether you can make words mean so many different things."
 "The question is," said Humpty Dumpty, "which is to be master – that's all."

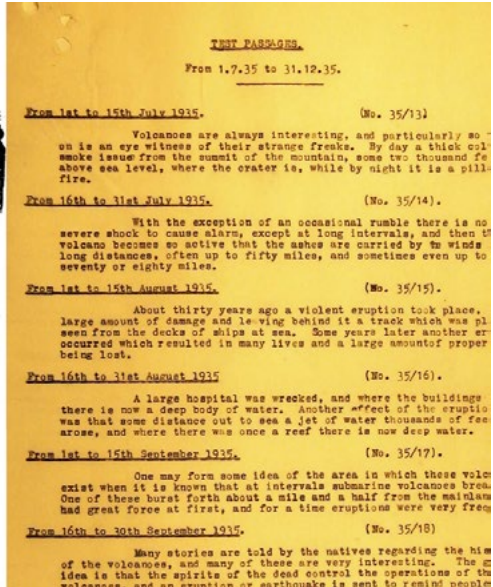


Image 10. Humpty Dumpty, from Lewis Carroll, *Alice in Wonderland*, illustrations by Sir John Tenniel and exemption test scripts © Public domain

And so, onto the slippery membrane of language, a tissue of words that wrap us in culture and identity and one that attempted to render Australia as white as egg albumen, protecting these shores from the influx of Chinese migration, a migration according to the xenophobes, as yellow as egg yolk.

心灵的控制首先在于物理的掌握。这是常人难以置信的简易。真正的掌握来自于宁静，从意图的思考到最终的言行。宁静是最高尚的美德。一位男士或女士的静坐是多么少见。

"That mental control depends, first of all, on physical mastery, is so obvious that few believe it. Real control begins from stillness, from deliberation of manner, and eventually speech and action. Stillness remains the rarest of virtues. How seldom does one see a man or a woman sitting still?" (source - National Archives of Australia).

These words are an example from hundreds of pages of Dictation Tests that operated in all Australian ports of entry from 1901 until 1958 with the primary function of excluding undesirables (specifically Asians) from migrating. This linguistic screening policy was coupled with the general and popular understanding that the indigenous Australian population would be bred-out, lightened and whitened until their genetic traces disappeared completely, thus extinguishing the world's oldest continuous culture.

Form No. 21.
DUPLICATE.

COMMONWEALTH OF AUSTRALIA.
Immigration Restriction Acts 1901-1905 and Regulations.

08/4977
No.

CERTIFICATE EXEMPTING FROM DICTATION TEST.

I, John Baxter ^{actg} the Collector of Customs
for the State of New South Wales in the said Commonwealth
hereby certify that Go Gee. (Wife of Au Gee)
hereinafter described, who is leaving the Commonwealth temporarily, will be excepted
from the provisions of paragraph (a) of Section 3 of the Act if he returns to the Com-
monwealth within a period of Three years from this date.
Date 28 Aupt 08 ^{actg} Baxter Collector of Customs.

DESCRIPTION.
Nationality Chinese Birthplace Canton
Age 26 years Complexion
Height — Hair Dark
Build medium Eyes Brown
Particular marks —

(For impression of hand see back of this document.)

PHOTOGRAPH



Date of departure August 08 Destination China
Ship Empire
Date of return 5 6 15 Ship Empire
Port Sydney
W. Donohoe
Customs Officer
W. Dragg

By Authority: Robt. S. Beas, Government Printer, Melbourne.

Image 11. A dictation test exemption certificate (for re-entry purposes) © Public domain

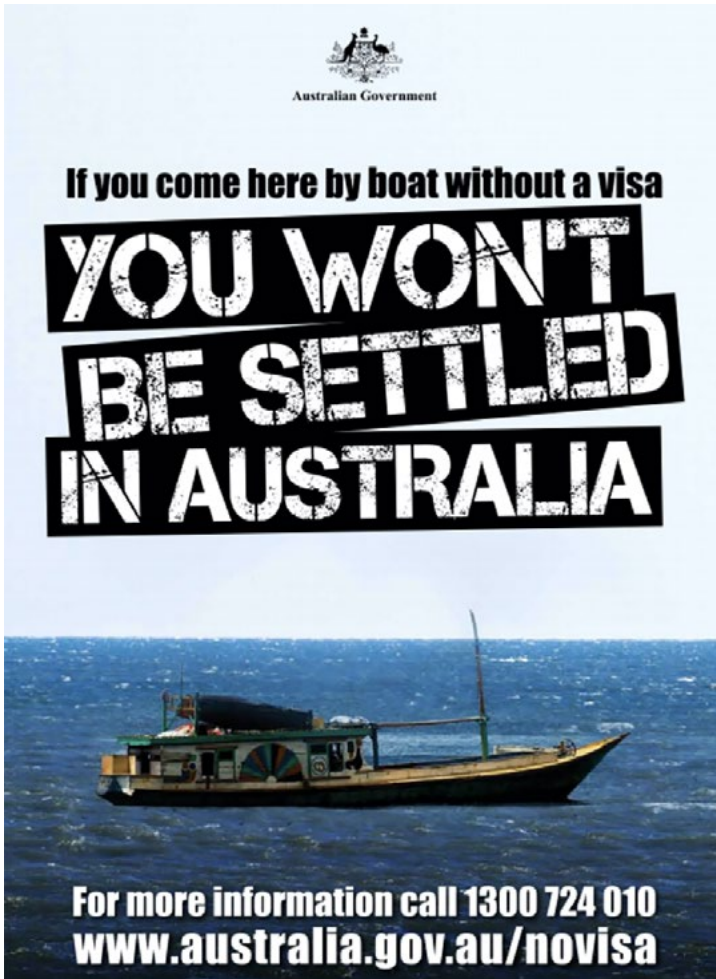


Image 12. Australian Government advertising © Public domain

This policy has an ominous resonance with the contemporary migration strategies of the Australian Government, who in flagrant disregard of International Human Rights Treaties, incarcerate asylum seekers in off-shore detention — as James Jupp noted “A message was sent out to the world that coloured people could not settle in Australia” (Jupp, 2002).

The membrane is after all a skin; a skin of colour; a skin of language and culture, a flexible container designed to keep what is of value within and what is perceived as a contaminant without — its permeability is variable and determines the nature, rate of change and adaptation, the type and efficiency of cultural metabolism.

To conclude — here is another Dictation Test passage just for good measure, its jingoism recalling the recent Prime Minister John Howard and his obsession with Cricket trivia as a criterion for citizenship. Perhaps you might like to take the test?

“The swagman wrapped his gnarled and desiccated digits round his minuscule ukulele and with prodigious and egregious deficiency of musicology essayed a resounding cacophonous rendition of ‘Waltzing Matilda’ that caused a phobic frog to hurl itself suicidally into a brackish billabong.” (source - National Archives of Australia).

Maybe the government mandarins finally achieved the Impermeable!

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Orders of the Heard: The Order of Sorcery

ABSTRACT

I am thinking of aural simulacra. Jean Baudrillard, speaking of things tangible defines the successive stages of the image. I try to follow his thinking and find analogies between the world of the visual and the ghostly reality of sound. I start by reading the audio signal as a sign and thus a signifier - signified construction. Then I introduce the orders of the heard. Following the signal's path toward its ontological metamorphosis as it passes from stage to stage, I now focus my hearing on the order of sorcery. Such signals are not captured or reproduced. They are conjured; copies with no original auralised out of virtually nothing. With this article I discuss the order of sorcery of the orders of the heard, the methodology of producing them and the effect they may have on the creative process as well as on the audience's appreciation.

KEYWORDS Sound Art, Sonic Hyperreality, Aural Simulacra, Postmodernism, Simulation, Authenticity.

RETROSPECTIVE IN HYPERREALITY

In postmodern philosophy the notions of simulation and hyperreality have been extensively analyzed and a variety of convergent definitions exist within the current bibliography. Yet when I study such writings in detail, I observe that in relation to aesthetic theory they refer mostly to things visible and tangible. As a sound artist I can't help but wonder if the same approaches apply to the immaterial realm of things audible. The short story of Jorge Borges *On Exactitude in Science* (1998) describes the creation of a map of the domination area of an empire (1998: 325). The map was so detailed that it covered in size the entire area and which over the years disintegrated, leaving only some marks which showed signs of its pre-existence. Jean Baudrillard discussing the concept of hyperreality and the influence of its constituents in modern times, reverses the story and describes the map as the object that precedes the area, while the area is the thing that disintegrates over time, leaving little – if not at all – marks of its pre-existence as shreds on some parts of the map (Baudrillard, 1994: 1). Consequently, I try to relate and search for analogies of this paradigm into the world of the aural. If the territory is the real and the map represents the hyperreal, then when audio media of capture, reproduction and production get on the scene, what conclusions can we draw upon the existence of acoustic hyperreality and its possible precedence over acoustic reality? Following Baudrillard's footsteps I embarked on a journey for discovering the aural equivalent of that phenomenon. Like him I start from de Saussure's definition of the sign which is "[...] of dual nature consisting of two elements" (2013: 76). If I read the audio signal as a sign, I discover a correspondence of what is defined in bibliography as the orders of appearances, which leads to the acknowledgement of what I call "the orders of the heard" (Messinezis, 2017: 146). These are the sacramental order, the order of maleficence, the order of sorcery and that of pure aural simulacra. Aim of this writing is to discuss the order of sorcery and consequently the art of seeking truths where there seems to be none. I apply without any critical disposition Baudrillard's approach to understand the ontology of such signals and their impact on the creative process, before finally I travel with Umberto Eco in hyperreality to investigate the relationship between such constructions and the audience's appreciation.

THE ORDERS OF THE HEARD

Jean Baudrillard in his effort to highlight the difference of representation as opposed to simulation initiates his stream of thought from de Saussure's definition of the linguistic sign and the duality of its nature. This enables him to introduce the successive – as he claims them to be – phases of the image. In turn, I take the notion of the image and replace it with that of the audio signal, which in turn seems to possess all the qualities of a sign and thus can be interpreted and analyzed as such. Consequently, an aural entity is born: The aural simulacrum which has an ontology of its own and the ability to transform under certain conditions and pass from one phase or order to the other. If I try to identify analogies between things tangible and things audible, I can clearly

see that the definitions of the various stages of the transformation of the image/symbol as representation of something, also apply to those that belong to the immaterial realm of the heard. Therefore, by paraphrasing the definitions of Baudrillard and applying the stream of thought which starts from reading the audio signal as a sign, I can speak of the orders of the heard.

The sacramental order comes first. “It is a reflection of a profound [acoustic] reality” (Baudrillard, 1994: 6); a good and faithful representation of an original audio signal. The second is the order of maleficence. It is the simulacrum which “masks and denatures a profound [acoustic] reality” (1994: 6). Here the signal is not attempting to reflect or copy an original, but it becomes a perversion of it. In the third the audio signal is of the order of sorcery and it “masks the absence of a profound [acoustic] reality” (1994: 6). This signal is playing at being a faithful copy of an original, but there is no model or original that is represented. Finally, we come to the point where the audio signal passes beyond the orders of acoustic simulation and becomes “its own pure aural simulacrum” (1994: 6); an entity that has no relation to any acoustic reality whatsoever yet precedes it.

OF MAGIC AND SORCERY

I aim to venture through and past the decisive point characterized by “(...) the transition of signs that dissimulate something to signs that dissimulate that there is nothing (...)” (Baudrillard, 1994: 6). In that sense within the immaterial realm of acoustic reality it seems to be the order of sorcery that: “(...) inaugurates the era of simulacra and of simulation, in which there is no longer a God to recognize its own, no longer a Last Judgment to separate the false from the true, the real from its artificial resurrection, as everything is already dead and resurrected in advance (1994: 6)”.

A deep analysis of the order of sorcery then can provide me with an insight of where the possibility of the precession of the simulacra becomes evident. Baudrillard’s definition of simulacra of the order of sorcery describes signs – and thus signals – that are hiding the fact that they represent no original. There seems to be two conditions then which if simultaneously satisfied, the produced simulacrum seems to be of the order of sorcery. The first refers to the fact that such constructs are conjured; produced out of virtually nothing. The second refers to the fact that they are not copying a model, but instead they represent their own reality. They are so convincing though that one might think they are actual reproductions of pre-existing realities, yet there is only the absence of any kind of concrete reality that they are concealing as forgeries of nothing, attracting our attention to something, which in turn does not exist. The order of sorcery is “a regime of semantic algebra where all human meaning is conjured artificially to appear as a reference to the (increasingly) hermetic truth” (Kang, 2014).

To understand the order of sorcery and the signals that are its initiates, stochastically we need to review signs of the visual analogue of the orders of appearances. In his effort to investigate the simulation of realism in motion picture sound, Vytis Puronas writes about “auralising something out of nothing”

(Puronas, 2014: 182). He too elaborates on a visual analogue using the example of painting. Painting though may produce a lot of different kinds of simulacra. From his analysis on how photographic artefacts can be transferred onto the canvas by hyperrealist painters who apply paint on an empty canvas, we could easily conclude that just creating something out of nothing does not necessarily place the produced simulacrum into the order of sorcery. If the painter reproduces with great skill a photograph along with its artefacts in such detail that it cannot be distinguished from the original, then according to Baudrillard's definition it is a simulacrum of the sacramental order.

By following a similar approach though as I try to identify simulacra of the order of sorcery, I think of David (Michelangelo, 1504). The face and body of David exist only in the artist's imagination. Using primary materials that can be perceived as nothing, such as a piece of marble, a hammer, a chisel, and skill, he creates a simulacrum of a man so perfectly sculpted that I may come to believe that this is how David actually looked like. Yet this is not the resurrection of David, as the image of David had already been dead and resurrected in advance and what the statue successfully conceals, is the absence of a real David. The initiation of an aural simulacrum within the circle of the order of sorcery is beyond media and methods of production. It is its ontological relationship to reality that distinguishes it and places it past the borderline of the world of things that dissimulate something and into the realm of things that dissimulate that there is nothing.

THE ORDERS OF THE HEARD

There is the sound sorcerer then, who wishes to conjure up aural realities with no originals and would experiment with or find a recipe to follow or a ritual to perform. This metaphor emphasizes on the process of creating something out of nothing but additionally not representing or simulating a pre-existing reality as a reproduction. Andy Farnell in his book *Designing Sound* (2010) starts with the statement "[t]his is a textbook for anyone who wishes to understand and create sound effects starting from nothing" (2010: 1). The book elaborates on the creation of sounds by using algorithms and code. The way the book is written resembles an alchemical textbook with a philosophy behind it, the description of the necessary tools or ingredients needed and a process to follow for conjuring up artificial immaterial realistic aural simulacra with no originals.

There is also the sound necromancer who attempts to create aural simulacra of the order of sorcery. Vytiš Puronas defines sonic taxidermy as the process of "recontextualization of dead sounds" (Puronas, 2014: 183). The audible reality once recorded is something that has already died. Sonic taxidermy though as Puronas analyzes it, serves the purpose of resurrecting a dead sound and providing it with additional attributes. He exemplifies this process in analogy as the mummification of a dead bird which is suspended with its wings spread open, in an effort to imply the notion of flight. This is not a simulacrum of the order of sorcery, yet if the sound necromancer takes the dead body of the sound, dismember it, and create a new thing that can be

interpreted as a concrete reality but having no relationship whatsoever with its dismembered carcass and what it used to represent, then we have another mystical process of evoking simulacra of the order of sorcery.

Similarly, the sound alchemist practices his craft of creating aural simulacra of the order of sorcery. Alchemy nowadays is defined as "[a] seemingly magical process of transformation, creation, or combination" (Stevenson, 2010: 38). As a practitioner of the art of metamorphosis then, the sound artist may take the dead or alive body of a sound and by subjecting it to a series of apparatuses and techniques, transform it into a new body of significantly different attributes. If such a procedure results to the creation of a sound that does not conceal any truth, but instead hides the fact that there is no truth behind and it is auralised out of – ontologically – nothing, then two necessary and sufficient conditions are satisfied, and the produce of the magisterium emerges as an aural simulacrum of the order of sorcery. This is how Jimmy McDonald conjured up the sound of the circus train in *Dumbo* (Sharpsteen, 1941). As it is stated in an article of the Scotsman, McDonald Just like a mystic: "[T]urned the sound-effects department into his own private world, where he would utilize anything he could think of to get exactly the correct sound – building more than 500 contraptions from scratch" (The Newsroom, 2009).

All we need to do is acknowledge the analogy between these macabre and mystical processes and auditory creative practices. Then we can speak with confidence of aural simulacra of the order of sorcery.

THE PLASTIC HYPPOPOTAMUS

One of the earliest analyses of producing simulacra and simulations is mentioned by Plato who through a dialogue in his effort to understand and face the sophist divides the image making art into two different forms: "the art of making likenesses, and phantastic or the art of making appearances" (Plato, 2008). Likeness-making refers to creating simulations of preexisting realities even if they are not exactly the same but look the same if seen from different angles of perception by the observer. The phantastic art on the other hand refers to making an appearance, not a likeness. Therefore, the creation of aural simulacra of the order of sorcery since they conceal the absence of a truth could very well be categorized as phantastic art. Phantastic sound design though even nowadays is a hard road to follow. With the help of modern technology such as 3D printing and virtual reality applications the production and use of simulacra of the order of sorcery has reached a peak within the visual world, but if we research the contemporary processes of auralising something out of nothing, it seems that "realistic sound design is still in its infancy" (Puronas, 2014: 186). So why would a sound artist or designer decide to follow the unpaved path conjuring phantasms instead of leaning onto products based on pre-existing acoustic realities? The answer is hidden within the factor that makes the creation of aural simulacra of the order of sorcery so hard. This is none other than sound's time dependency. The temporal characteristics of sound then even though it is the greatest challenge for producing such simulacra, is also one of the reasons

why someone would prefer to delve into sound divinations. When something is evoked out of nothing, copying no original, then its creator is the absolute and sole controller of all its characteristics and attributes. Therefore, a convincing result would not only refer to the pitch, the texture, and the articulation of a particular sound, but also its behavior over time. A good example is Farnell's definition of procedural audio, which "is non-linear, often synthetic sound, created in real time according to a set of programmatic rules and live input" (Farnell, 2007: 1). Even more than just the audio signal itself, these methods simulate perceptual angles and aural behaviors that by reproducing a specific acoustic reality would not be possible to achieve otherwise.

The value of such practices is evident in applications such as video games, yet the composer and the sound artist may very well take advantage of synthetic sound based on no specific original. As computer music composer Jean-Claud Risset explains: "The power of synthesis permits one to provoke sonic illusions by contriving the physical structure of the sound in specific ways that trigger certain perceptual mechanisms" (Risset, 1996: 35).

When we venture into the magical world of aural simulacra and even more so when we examine simulacra of the order of sorcery, it all comes down to Umberto Eco's investigations of hyperreality and the conclusions he draws when trying to explain why we would resort to the fake when we could have the real thing. "When there is a fake – hippopotamus, dinosaur, sea serpent – it is not so much because it wouldn't be possible to have the real equivalent but because the public is meant to admire the perfection of the fake and its obedience to the program (...) Faked nature corresponds much more to our daydream demands" (Eco, 2014: 44).

I could never dare to place my head into a hippo's mouth. Yet if the hippo was made of plastic, I could take selfies of myself taming the beast. All we need to do is to imagine the hippopotamus as sound.

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Death as Absolute Transgression in the Philosophy of Michel Foucault

ABSTRACT

In a series of lectures, posthumously published under the title “*Society Must Be Defended*,” Michel Foucault outlines a historic shift in the mode of governmentality. The traditional idea of sovereignty relates to a power of taking life away. The sovereign is a ruler endowed with the right to end the lives of citizens or, conversely, to let them live. In the 19th century, however, a new paradigm emerges. This is “the power to ‘make’ live and ‘let’ die”. Foucault describes this novel form of power as “biopower”, because, rather than disciplining individual bodies, it is applied in a generic manner to the biopolitical management of entire populations. The subject of biopower is a statistically constructed multiplicity treated in the manner of a mass. Parallel to this change Foucault also registers the disappearance of public executions. This occlusion of the murderous aspect of power stems from a secularized relation to the issue of death. In a traditional social context, death is a transition between two sovereigns, the earthly ruler and the heavenly God. Secularization undoes the latter, but according to Foucault this rejection of the afterlife also has the paradoxical effect of transforming death into an escape from power. A “disqualification of death” ensues, which places death outside sovereignty. In our essay we seek, through a close reading of Foucault’s biopolitical lectures and his 1963 “Preface to Transgression”, written in tribute to Georges Bataille, to understand the central place of death in Foucault’s work. Beneath the surface of Foucault’s work there is an affirmation of death that undoes the subject and undermines authorship.

KEYWORDS Biopower, death, extinction, freedom, nihilism, sexuality, transgression.

BIOPOWER AND THE DISQUALIFICATION OF DEATH

Death has a reality-threatening potential. Not only does this relate to the case of an individual life, but also to the longer-term persistence of the social realm. We are under no compulsion to conceive of society as being in any way or manner permanent. Neither is social philosophy duty-bound to accept the reality of the social realm as necessarily desirable, conservable or sustainable. The work of Michel Foucault in particular poses an eternal challenge addressed to the self-serving fictions of power. Chief among the various ideologies of power is the promise to preserve the lives of those subjected to it. In his 1975-1976 lecture series, published posthumously, an in particular on the occasion of the final lecture on March 17, 1976, Foucault introduces the idea of “biopower”. Sovereignty, at least in the European context, has traditionally been about the right to take life away. The sovereign is a political agent, a leader who is legally endowed with “the right to kill” (Foucault, 2003: 240). On this traditional view, a negative meaning is attached to power. It is purely negative, and has no positive content whatsoever. It is all but synonymous with a legally recognized and divinely sanctified ability to “take life or let live”. (241). During the course of the 19th century, however, power takes an unprecedented hold over life, and greatly expands in scope. Power’s grip over life increases to the extent that it appropriates ever more positive life-affirming functions. No longer is the sovereign content to merely let subjects live their lives: their supposed health and well-being becomes the object of government interventions. Power distances itself from former paradigms, and embraces a positive content, representing itself as a beneficial force. Populations are only regulated, quantified, locked down and surveilled for their own greater good. A new, “non-disciplinary” mode of power emerges, in tandem with the birth of the social sciences. To assist the State in enumerating and taxing the population, demography is required, and from there it is only a few steps toward the creation of sociology and anthropology. Techniques centering on the regularization of individual bodies come to be displaced by an ubiquitous mode of power applied “to the living man, to man-as-living-being; ultimately (...) to man-as-species” (242). The population is the true subject of biopower. From individuality, we move to a massification, the construction of a statistical aggregate that is manipulated, regulated and protected by power. Indeed, the very creation of populations and demographic processes is a product of the State apparatus. All phenomena, especially uncontrollable natural occurrences such as epidemics, are problematic in the sense that they tend to evade or undermine government control. Over the course of the 19th and 20th century, a new mode of power thus emerges, “the power to ‘make’ live and ‘let’ die” (241)¹. At this juncture, however, a very different theme concerns us, one that nonetheless connects to biopower’s preoccupation with the construction and regulation of collective vital social phenomena. As Foucault makes clear, it is not just a question of eliminating illness from the social

¹ Some have theorized productively about the applicability of Foucault’s ideas to the contemporary global COVID-19 pandemic, and we ourselves have also written of the various reactions of biopower to the pandemic situation. cf. Golikov, A. S. (2020) The (Re-)Birth of Biopolitics. Autonomy, Biopower, Coronavirus, Discourse, Emergency, Fear, Globalization, Health, I... *Ukraine Society* 73(2): 9-28; Horvath, Mark & Lovasz, Adam (2020). Foucault in the Age of COVID-19. Permitting Contingency in Biopolitics. *Identities. Journal for Politics, Gender and Culture* 17(1): 144-153.

body, for “the field of biopolitics also includes accidents, infirmities, and various anomalies” (Foucault, 2003: 244). Ideally, biopower seeks to rid society of any and all dysfunctions.

After having registered the transformation of sovereignty, Foucault makes an apparently perplexing detour in his lecture, remarking upon the gradual disappearance of public executions in Early Modern Europe, characterizing it as “the disqualification of death”. The gradual disappearance of such public events is a well-documented historical fact, which often preceded the abolition of the death penalty altogether². Today very few nations practice execution, and rarely is it considered appropriate to be made a public event. In general, a similar trend can be discerned regarding punishment more broadly. Punitive public punishments are also controversial and in this day and age rarely practiced, at least not by governments. Regularization replaces ritualization. Foucault opines that the reason public execution was, until the advent of the rationalist 18th Century Enlightenment, a public spectacle is that death symbolized a transgression, a crossing of boundaries intensely charged with meaning. As Foucault states, “death was the moment when we made the transition from one power – that of the sovereign of this world – to another – that of the sovereign of the next world” (Foucault, 2003: 247). Differently put, when putting a subject to death, in the eyes of the pre-secular society of Early Modern Europe, this meant a surrendering of this condemned individual’s soul to God. Execution meant that the ruler had to release the individual from their bonds. It is only a slight exaggeration to claim that this also implied a strange type of emancipation from subordination to terrestrial power. True, the soul was not released into empty space, but entrusted to the care of a merciful yet strict God, the celestial sovereign. Nonetheless this belief still meant that the realm of public power had clear limits. There is only so much a ruler can do against somebody who has already been put to death and given over to God. After secularism and the tremendous decrease in the plausibility of theological doctrines (at least in “Westernized”, “modernized” or “disenchanted” parts of the globe), Foucault contends that the relationship of power to death changes dramatically. No longer is death a relative transgression, a transition from one realm of power to another. Rather, perishing is akin to an exit into an indeterminate emptiness. Just vanishing, we are imperceptible to surveillance and all other power games. The deceased are uplifted into blankness; for them, the existence of control ceases to matter. Death is an absolute transgression, an explosion that shatters the ambitions of biopower. Because the latter is all about the will to make live, those who simply refuse to live, giving up on life, represent a clear threat to the system. If death today is well and truly “the end of life”, it also means “the end of power too,” for a death equated with complete nothingness is “outside the power relationship” (248) The purely negative ability to die represents an unsurpassable obstacle to its operations. As Foucault continues, “power” today “has no control over death”, although it can certainly “control mortality”, striving to limit this contingent occurrence (ibid). One could of

² Public executions, for instance, were abolished in the United Kingdom in 1868, but had been relatively rarely practiced for a while prior to this because of social pressure. For more on this historical context see: Low & Rutherford, 2021.

course cite a number of instances even from the 20th century when governments attempted to retrospectively eliminate the memory of dissidents who had already been murdered, such as the famous case of the “disappearances” during the military dictatorship in Argentina in the 1970s. The secularized complete extinction of the soulless subject in no way implies that the State does not strive to police the memory of the dead as much as the demographic processes of living populations. To dismiss Foucault’s contention purely because of such examples would be to miss the point. What is Foucault claiming then? And why introduce the historiographically documented phenomenon of the disappearance of public executions, as well as reflections upon the changing status of death in a secular age, into a debate about what power is today?

Foucault mentions the example of the death of Spanish dictator Francisco Franco, which occurred around a few months prior to the lecture in question (on the November 20, 1975). This example is of interest for Foucault because of the peculiar circumstances of the death of the dictator. Instead of a sudden demise, Franco fell into a coma almost a month prior to his final demise, on the October 30. Because he was being kept alive on a life support machine, Franco had no knowledge of being all but dead for three weeks. For Foucault the example of the dying comatose dictator – which the philosopher describes somewhat distastefully as “a minor but joyous event”, no doubt because of Franco’s repressive political views and prior atrocities – highlights a divergence between two technologies of power: on the one hand, we have a disciplinary technology of power, on the other, biopolitics (249). The first concerns itself with controlling the individual body, while the second relates to the control of social life in general, and is especially concerned with the well-being of the population in particular. What Foucault seems to hint at is that the scope of biopower corresponds to life in an abstract sense, even outside its attachment to an individual subjectivity. The helpless comatose patient is both inside and outside power. The patient’s absence of personal responsibility or will-power places them outside the range of disciplinary or sovereign power, yet because of the dying person’s dependence upon life-support technologies intended to preserve life at all costs, they are absolutely reliant upon biopower. Subjectivity is therefore torn into two distinct poles, and comatose Franco is the theoretical site of this cleavage. The irony here is that a bloody ruler who exercised the sovereign power to make die, became the passive subject of a superior biopower that made him to live to the very end, even after consciousness had clearly departed. Despite the best efforts of the medical profession, even the mightiest of dictators absconds from life. Neither technology of power can persist beyond the borderline between life and death, hence the absolute necessity of preserving biological processes even after subjectivity is no more. To this very day, even the most liberal societies are reticent to codify the right to euthanasia. Voluntary death in particular seems to escape the matrix of control. Why though is Foucault inclined to affirm the possibility of death as an absolute transgression completely outside biopower? Guido Preparata, a less than sympathetic reader of Foucault, nevertheless makes an important point when claiming that we cannot achieve an adequate understanding of Foucault’s postmodern social theory without being familiar with Foucault’s indebtedness to

Georges Bataille. As Preparata declares without equivocation, “Foucault borrowed the near entirety of his neologisms, metaphors, allegories, and philosophical constructions from Bataille, wholesale”. (Preparata, 2007: 8). Here our task is not to determine if this characterization stands for the entirety of Foucault’s work, including his theoretical positions and concerns, as well as the representation of power he provides. Given the size of the work in question, proving or disproving Preparata’s bold assertion would require an entire monograph. What we would wish to claim is that accounting for Foucault’s apparently inscrutable fascination with death as a means of escape from biopower does require a recognition of the former’s theoretical indebtedness to Bataille. Death discloses the limitation of biopower, for, in spite of its pervasiveness, biopolitics is limited to the maintenance of the population’s “homeostasis” (Foucault, 2003: 249). The death of the individual is an absolute transgression that cannot be made the product of an implicit or explicit politics. Dissolution is a vanishing from view, a becoming imperceptible. The all-seeing-eye of power cannot have access to this blank horizon where language fails and binary codes break down.

FOUCAULT’S EMBRACE OF DEATH

To understand this emphasis on the transgressive dimension of death, we must travel back in time to 1963. In this year, after the death of his friend Bataille, Foucault pens a relatively rarely cited text, entitled “A Preface to Transgression”. This key essay is not only a tribute to an important and widely admired predecessor, but can also be treated as a key of sorts to Foucault’s own work. The point of departure is the “death of God,” a Nietzschean theme that forms one of the central concepts in Bataille’s work. The evacuation of transcendental meaning in modern societies fundamentally alters the way transgression operates. To transgress means to cross boundaries, but in a purely immanent world we cannot attach any all-encompassing meaning to such a traversal. It is no longer a question of stepping across the borders of one realm and entering another sovereignty. Emptiness replaces God in the atheological universe. As Foucault explains, in an atheologically reinscribed mode of modern religiosity “transgression prescribes not only the sole manner of discovering the sacred in its unmediated substance, but also a way of recomposing its empty form, its absence, through which it becomes all the more scintillating” (Foucault, 1963: 30). The form of atheological writing addresses itself directly to absence. Foucault explains the centrality of sexuality to Bataille’s thought in terms of its intimate relationship with transgression. Sexuality is a self-emptying rather than a plenitude, a night of dissipation, indelably tied to both our finitude and our dissolution. Even the reproductive function cannot be separated from a movement of disincarnation. Excess tends toward annihilation. As Bataille emphasizes, “death is the inevitable consequence of super-abundance” (Bataille, 1986: 101). Writing of the relationship between the “limit” and the movement of transgression that crosses the former, Foucault emphasizes the mutual dependence of these two poles. We cannot neatly separate these two axes, for both are, in truth, abyssal movements, coalescing and blending with one another, becoming infinitely entangled. Dissolution and creation, death and

life, entropy and negentropy, all such concepts are but retrospective theoretical constructs that serve to solidify these fluidities, so as to simplify our thinking. Judith Revel, writing of the situation of immigrants in contemporary world society, gives expression to the view that biopolitics has degenerated from the protection of life and the enforcement of vitality to a new Social Darwinian biopolitics of “not fostering life and leaving to die”. (Revel, 2019: 181-189)³. On such a view, the life of the Other has an absolute value, as does vitality in general, and ought to be protected by the State. But such a politically-charged vitalism, while admirable in its humanitarianism, is far distant from what Foucault’s philosophy is really about. Similarly, David M. Halperin’s redemptive reading of Foucault in terms of a semantic of broadened humanist emancipation also seems to badly miss the mark (Halperin, 1997). Foucault makes no pretence to be on the morally “good” side of history. For the postmodern philosopher, not even life can be invested with an absolutely positive value. A truly transgressive philosophy questions the privileging of life over death, even at its own expense. Transgression, Foucault makes clear, is “a movement of pure violence,” without any other goal than the destruction of the perpetually, pervasively, irritatingly persistent limit. (Foucault, 1963: 35). From a humanitarian perspective, transgression can be either liberating (as in the case of a genuine political revolution), or oppressive, as when a semantic of rebellion is instrumentalized by a hidden fascist machinery of power for its own pragmatic purposes. From the perspective of the transgressive theoretician, the “good” and “bad” forms of transgression are not absolutely given categories, unopen to critical interrogation. Rather, these binaries are themselves but transient constructs, always vulnerable to contestation and overthrow. Instead of a black or white difference, the relationship between the limit and the movement of transgression that crosses the limit “takes the form of a spiral” (ibid). How then can transgression be conceptualized

According to Bataille’s view, the death of the organism and the orgasm alike confront us with the same ontological lesson: both of these key events of a living being’s life reveal “the falsehood of discontinuity” (Bataille, 1986: 97). Social institutions are always attempting to reduce the amount of contingency within their internal operations. We have assurances even from pornography websites that they operate a safe, hospitable, risk-free environment, implicitly or explicitly labelling the human craving for danger as a form of atavism or barbarism. The modern subject is a risk-averse profit-calculating machine that “reacts” instead of feeling, plans ahead instead of spontaneously engaging in unpredictable forms of behavior. A frequent misunderstanding concerning Foucault’s philosophy is its mischaracterization as a form of social “critique”. In the “Preface,” Foucault speaks of no such thing: it is all about “contestation,” which he describes as “nonpositive affirmation,” a radical theoretical action that carries terms “to their limits” until “one reaches the empty core where being achieves

³ This is not to downplay the suffering of the oppressed and marginalized. Rather, we point to the need to recognize the inherent limitations of humanist emancipatory projects. Freedom *from* still implies the implied presence of the negated category, and the extension of recognition inherently leaves blind spots in its wake. Instead of a linear conception of progress as the expansion of a circle of solidarity, what is truly required is a freedom *to* that is not exclusive of any agency, nonhuman beings included.

its limit and where the limit defines being” (Foucault, 1963: 36). Underlying this admittedly poetic efflorescence of words is a key admission: what Foucault is doing, and indeed shall proceed to do in subsequent works, is the very opposite of a critique or a rejection. Rather, in every case, his methodology relates to a simultaneous affirmation of the facts of the matter that nevertheless shys away from actively embracing any given social situation or any form of power. A conscious distancing of one’s discourse from any and all distinct positionalities in favor of an emplacement within a Neverland or Erehwon. The privileging of transgressive experiences cannot be instrumentalized in favor of any binary, including moralistic dualisms relating to good or evil, justice or injustice. What experiences of the limit do allow for is a liberation of language from the pressure to conform to any standard of right. Transgressive authorship is not about revealing truth, which Foucault characterizes as “a ridiculous pretension,” but rather pertains to the emancipation of language from an ontotheological attachment to conceptions of propriety (39). In this day and age, with its thirst for justice, such a position can strike us as dangerously ambiguous, even self-destructive. Transgressive philosophy makes the leap willingly. The secret of the philosopher who is willing to traverse the limit lies in the adherence to non-duality. A revelation is achieved, the mentioning of the unmentionable, and this suicides philosophical discourse, unravelling the subjectivity of the author. Those who commit themselves to a path of enlightenment through transgression must be prepared to fall victim to their own discourse, for language, especially in its extreme manifestations, bordering upon silence, cannot be dominated (42). This absentology of language evacuates the subject, until nothingness is attained. Foucault’s text is a performative one. Let us not forget, it was written on the occasion of the *death* of a fellow philosopher! This demise produces a posthumous writing, in the form of a homage that paradoxically celebrates the spontaneous play language at the expense of the death of the author in question. For Foucault, the ultimate form of transgressive writing relates to the “shattering of the philosophical subject,” conceived of as the unwriting of philosophy via the means of a philosophical semantics (43). A self-destructive mechanism is smuggled into the hallowed Cathedral of discourse, leading to chain-reactions and an ever more systematic decomposition of the royal or State sciences. Power and governmentality like to couch themselves in a universalistic, humanitarian discourse of inclusivity. What Foucault does is subvert the power of anthropomorphization and enculturation even on the micro-political level of authorship. The figure of the transgressive philosopher registers a “breakdown of philosophical subjectivity and its dispersion in a language that dispossesses it” by creating an asubjective space of absence within a hollowed-out authorship that is already necrotic by definition (42). As Judith Surkis comments, “Foucault paradoxically animates Bataille’s rhetorical figure for the sovereign philosopher’s self-loss, bringing this figurative death to life” (Surkis, 1996: 26). A convulsed language invested with its own loss, an upturned eyeball connected to a consciousness is aware of its impending doom, a refiguration of words outside any line, a detour from existence to absence, a limitless reassertion of the supreme moment: Foucault gifts us with a non-positive affirmation of death, in all its abysmal beauty. After subjectivity, after the perpetration of the atrocity of

unwriting our philosophy, there lingers “an inner detachment from the assumed sovereignty of thought or writing” (Foucault, 1963: 43). Instead of attaching us to a vitalist affirmation of life or a similarly misguided reappropriation of productivity, we discover in Foucault a fundamentally ascetic detachment, a permanent investment in the crisis of contestation. Overflowing its own embankments, the philosophical language of transgression deluges into a communication that ends the fiction of discontinuity.

As we have seen, Foucault’s idea of contestation connects to the non-dual nature of transgression. The limit and the crossing of the limit are mutually inseparable. Each line is also, potentially, a movement, and its actuality lies in its potential destabilization as limitless mobility. Hence the inherent porosity of borders. In Roberto Nigro’s words, Foucault’s concept of transgression “contains nothing negative; correspondingly, this affirmation contains nothing positive: no content can bind it” (Nigro, 2005: 660-1). Neither can transgression be retraced to any dialectics. If governed thinking relates to the reconstruction of social or individual existence along the lines of an enchainment inside relations of desire and their corresponding modes of subordination, then transgression affirms the constant experience of intensity outside the confines of the biological organism. No longer being subject to constant moral scrutiny, transgressive authorship fails to live up to expectations by not protecting or immunizing itself. For Foucault, the central image of Bataille’s work is the upturned eyeball, an organ replete with symbolic meanings that features in several of the latter’s literary works, chief among them *The Story of the Eye* and *The Blue of Noon*. Not only does this peculiar corporeal situation entail an impending loss of consciousness or the advent of an orgasm, but its blank whiteness also implies, at least in Foucault view, the absence of meaning, “the void into which” transgressive philosophical language unworks itself (Foucault, 1963: 48). The completion of transgression returns the subject to a formerly erased continuity with the outside. As Tim Themi emphasizes, on a Batailleian view “both sex and death mean dissolution back in the continuity of the real of nature from which we have distanced ourselves via taboo” (Themi, 2015: 109). This annihilation risks the spectacular failure of understanding, the suicide of reason, and the destruction of morality in general in favor of a finite refoundation of a zone of detached intensities. In his essay Foucault places Bataille at the head of an entire tradition of thinkers, retrospectively labelled the “postmoderns,” who seek to overthrow totality and replace the singular sovereign with an affirmation of plurality and finitude. In Foucault’s own words, the emergence of “sexuality,” defined as a libidinalized asceticism (the practice of reaching an intimation of enlightenment through a series of self-emptying discarnations, achieving desirelessness through the enactment of each and every desire to the point of near-bodiless exhaustion) entails the birth of true moral relativity, in “the form of a thought in which the interrogation of the limit replaces the search for totality and the act of transgression replaces the movement of contradictions” (Foucault, 1963: 50). A contestation of disqualification that seeks an end to distinctions: transgression, taken to the limit, is all but synonymous with an opening that communicates with absence.

CONCLUSION

Undoing philosophy is more than a theoretical exercise. The unwriting of philosophy can be best characterized as an existential choice, a personal affirmation of the original impersonality of language, as well as a recognition of the emptiness of being. It is a well-known fact that Foucault willingly engaged in risky sexual behavior, and did not care about contracting HIV/AIDS. Without wishing to engage in idle speculation or, worse, to romanticise the harsh realities of the AIDS epidemic which has claimed many LGBTQ lives⁴, one could nonetheless make the claim, pending of course further biographical investigations, that Foucault committed a form of ascetic suicide through a sexual *jouissance* without limits. Some have indeed opined that Foucault's well-documented sexual promiscuity was explicitly suicidal in its intent (Lehman, 1993). Whatever the truth of the matter, transgression demands an absentological language of unworking. Through the existential choice of the transgressive philosopher, life and extinction coalesce, in the space of a single immanent life. The image of discontinuity is voided by a fully dissipated experience of plenitude in absence. Could Foucault have been the most consequential of Bataille's disciples, taking the shattering of the subject to its logical conclusion through an act of self-destruction?

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4 The case of the HIV/AIDS epidemic and its disgraceful treatment, including its initial labelling as the "gay disease" in the U.S. Mainstream media, could very well constitute another important example of the biopolitical paradigm summarized by Revel above as "not fostering life, and letting die". The willful neglect of the health of LGBTQ communities by the U.S. Government, for instance, was well-documented by journalists at the time such as Randy Shilts, who also succumbed to the disease.

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Hip Hip Hybridity and Leaking Arts

ABSTRACT

The term hybridity has been circulating in contemporary art discourse for almost three decades now, however recently it has become a new buzzword, found in a wide range of texts on contemporary theories and practices. The emergence of artistic-scientific paradigm has led to the rise of artistic research in the last decade and hybridity seems to have taken the position of a new normativity in contemporary art. Having employed the theory of liquid modernity by Zygmunt Bauman, this paper deals with the hybridization, which is considered a constant process, flux, taking place in contemporary art and culture, whereas traditional disciplinary boundaries are becoming liquid, leaky - fixed categories are losing boundaries as more and more hybrids are being created instead. The paper focuses on the category of installation art, which is one of the most notable catalyzers for the process of hybridization, due to its immanent flexibility and openness to other mediums. This research forms a hypothesis that this is the outcome of the merge between art, science as well as other disciplines. As a result, this paper explores the indefinite condition of contemporary art and proposes liquidity as one of its most characteristic features.

KEYWORDS Hybridity, liquidity, Installation art, Contemporary art.

HYBRIDITY VS LIQUIDITY

The present paper is built upon two main concepts, namely hybridity and liquidity. Both of them are widely employed in the debates surrounding contemporary art since artistic and critical methods, practices and discourses now seem to involve a variety of formerly non-artistic fields and. But the question is how does it relate to the conventional disciplines and mediums of art? Are they still relevant to the present? And how are new forms of creativity introduced to the field? For a few decades hybridity has become one of the buzzwords in contemporary culture, being involved in a vast number of areas, starting from natural sciences, industry and ecology to philosophy, sociology and contemporary art as well. In the latter field hybridity should not be considered as just another trending phrase, but rather as an ongoing process, accelerated by constant reconsideration of systems of knowledge.

In contemporary art the notion of hybrid is frequently associated with a French sociologist Bruno Latour and his actor-network theory. In his well-known book "We have never been modern" (1991) Latour criticizes the project of modernity as the one creating hybrids, yet splitting as well as purifying them into separate fields of knowledge such as nature, politics or discourse. As a result, modernity has established such dichotomies as nature – culture or subject – object, human – thing and past – present. What the authors suggests is that we should rethink these distinctions as well as the definition and constitution of modernity itself. He offers a new explanation of science, which finally recognizes the connections between these arbitrary dichotomies. This means reconsidering various subjects and objects as heterogeneous actors in interconnected, dynamic networks (Latour, 1991: 8).

On the one side of the coin there is hybridization, while on the other side of it there is the process of leakiness, liquidity, which may be applied to many art categories nowadays, since hybridization means constant flux or withdrawal of disciplinary boundaries as such. The term liquidity in the present paper is linked to a Polish – British sociologist and philosopher Zygmunt Bauman and his work "Culture in a liquid modern world" (2011). The author suggests and investigates the liquid state of modern culture. Bauman uses the term "liquidity" to define the contemporary condition, what others authors describe as postmodernism, late, second or "hyper" modernism among other -isms. According to Bauman (2011), liquid modernity is "self-propelling, self-intensifying, compulsive and obsessive "modernization", as a result of which, like liquid, none of the consecutive forms of social life is able to maintain its shape for long" (11). Solid forms are leaking and unlike before, these dissolved forms are no longer replaced by other solid and stable forms, but "in the place of the melting, and so impermanent, forms come others, no less, if not more impermanent forms" (Bauman, 2011).

Considering contemporary art, liquidity seems to be a suitable term to describe the current condition of it, as it has become such a broad and inclusive field of creative opportunities, that it is hardly possible to categorize it in terms of movements, genres, historical periods and the term hybrid is let as one of the most acceptable and liquid categories to be used. This might be one of the reasons why contemporary art is so resistant to any fixed definitions and thus can be characterized as liquid as well. Nonetheless, one cannot forget that already in the 20th century many aspects of art's traditional definitions

were augmented since artists started working with non-art media, contexts and concepts. Dividers between art genres such as sound, theatre, cinema and visual arts were torn down back then. However even to a bigger scale one is able to observe the process of hybridization in the last 20 years, as not only the boundaries of art categories have been leaking, but philosophy science, technology and nature seems to be equally entangled partners in the process of artistic experimentation. As a result, the process of hybridization includes not only art genres, but a much bigger range of disciplines, technologies and discourses.

ARTISTIC RESEARCH ON THE PEAK

One of the finest examples of how hybrids are introduced in the field of contemporary art is artistic research. In the last decade it has become one of the most dominant creative strategies in arts, enabling artists to participate in various discourses, rather than being confined to the artistic field. Currently art community has a chance to observe the rise artistic-scientific paradigm, as more and more projects where scientists and artists collaborate can be noticed in contemporary art centers around the globe. The perfect example of which is the discourse of Anthropocene as it is center of focus in a number of artists' works, museum exhibitions and critical texts in recent years.

In these projects scientific knowledge is entangled with artistic practices, however artistic and scientific methodologies do not go anywhere. Instead, they function together, while catalyzing the transformations of one another. In this case activation of hybridity seeks to open closed systems of knowledge and enables to explore and expand new horizons in both or more fields (Sabolius, 2018). Artists not only participate in discussions and integrate different methods, they do it to such a degree, that it might be considered to be developing into "independent form of knowledge on its own" or could even be characterized as a sensual form of truth (Busch, 2009: 1). Not without a reason, the curator of the 9th Bucharest Biennale "Farewell to Research" Henk Slager has titled the second decade of the 21st century as a decade of research, as it has become one of most dominant ways of producing art. However, the artistic research is still a rather a new phenomenon that is not well defined, yet the liquidity of it is rather well exemplified by the fact, that the term "post-research turn" is already circulating the discourse (Slager, 2020: 16).

Contemporary art, therefore is a liquid category expanding without fixed borders and new terms coming and going day by day. Expansion of methodologies and requirements for particular mediums reminds Rosalinda's Krauss famous phrase that there are no longer any medium-specificities, no "painters" or "sculptors", but only "artists" (Krauss, 1999: 16).

THE ROLE OF INSTALLATION ART

Installation art could be considered as one of the most flexible categories of contemporary art. It used to be a specific type of space and experience related art. Nowadays it can include anything from spatial artworks, creating environments

to the most basic expositions of paintings or photography. Due to its immanent flexibility and openness to other medium as well as capability to adapt different settings it has evolved into one of the most widely used art genres. This process started in the final decade of the 20th century when installation, from a relatively marginal art practice transformed to its current central role in contemporary art. “These days installation art seems to be everybody’s favourite medium” wrote the influential American critic Roberta Smith (1993).

Today installation art could be seen as a catalyzer for the process of hybridization and introducing new bodies of work into the field of contemporary art. The genre of installation frequently “accommodates” new hybrid art forms. Installations are no longer just about aesthetic environments or objects for heightened perception, but are more concerned with the process of experimentation and collaboration whether it would be between scientists, artists and visitors or humans, plants, animals as well as other beings. Installation art involves more and more laboratory infrastructure with petri dishes, sterile like environment, microscopes or high-definition cameras allowing one to observe living beings, cells or using visual as well as textual speculations encourage one to think and see them from different perspective. Installation art is also relevant to the introduction of new interactive technologies including virtual and augmented realities, digital art forms and many more that find their way to the contemporary art field through the category of installation art. As a result, contemporary installation is where one can feel like being in a botanical garden, science laboratory, zoo park or space agency.



Image 1. Pakui Hardware, Vanilla eyes, mumok, Vienna, 2016. Installation. mumok, Vienna.
Photo by Ugnius Gelguda/ © Pakui Hardware & mumok, Vienna

Bauman states that liquid modernity marks the beginning of a “post-paradigm” era in the cultural history and although the term “paradigm” is still used in everyday language, it is soon to join the family of the “zombie categories”, as liquid modernity is the place where the battle against every kind of paradigm takes place (Bauman, 2011: 13). However, installation art does not seem to be joining this family, as its liquid character keeps it as relevant as never before. At the same time this category is leaking, since it is getting difficult to qualify, what kind of parameters constitute installation art as so many different materials, mediums and strategies find their place in art scene under this category. As a result, installation art continues to be shaped and influenced by developments in other fields and in turn enables them to be legitimized as a part of contemporary art.

PSYCHOTROPIC HOUSE

As a case study provided here is an installation “Psychotropic House: Zoetics Pavilion of Ballardian Technologies” by Lithuanian artists Nomeda & Gediminas Urbonas. These artists created a laboratory infrastructure and in collaboration with scientists as well as visitors were growing spores with a hypothetical goal of growing a house. The work consisted of four climate-controlled spaces, isolated by transparent plastic. It was an installation as well as a speculative experiment, where emphasis was on the collaboration between human and non-human actors and the possibility to think of new ways to live and create together, as well as to provide a critical perspective towards natural and biotechnological sciences that are employed for the benefit of humans, but not necessarily of the planet.



Image 2. Nomeda & Gediminas Urbonas.

Psychotropic House: Zoetics Pavilion of Ballardian Technologies. The 12th Baltic Triennale 2015.

Photo by: Dalia Mikonytė. © Nomeda & Gediminas Urbonas

This project is a good example of how productive this hybrid of science and art paradigms might be. Mycologists in the end of the 20th century usually worked in the laboratories researching mushrooms, but due to various reasons many of them now are just collecting spores or end up working in industrial spheres of growing mushrooms where the main goal is to grow as much and as healthy plants as possible for the sake of economic profit (Sabolius, 2018: 129). In the last decade mushrooms have become a very frequent weapon of choice by many artists in their research. In this case as well as in other artists gain the opportunity to explore the grey fields of science, as they can experiment with different materials and profit is not their primary goal, therefore they can develop and find some new insights into materials and their qualities. The artists invited visitors to take part in the experiment and share their visions on what could be done together with the spores. This project is a rather good illustration of how installation art functions as an aesthetic, environmental object when viewed from the outside, but it is also a space for collaboration, educational workshops and a place for organic mushrooms to grow.

CONCLUSIONS

To sum up, contemporary art includes more and more non artistic fields, methodologies and equipment. Art categories are being created at a fast pace, but due to constant impermanence, they do not gain stable positions and new works as well as definitions are produced instead. Traditional art genres are leaking and most of them are losing their boundaries, since they have become hybrids themselves. In recent decades artistic research has become one of the most notable strategy for artistic practices, installation art is one of most popular art categories to use as a space for research. As a result, it catalyzes the process of hybridization and provides the possibility to include various hybrid forms of artworks in the field of contemporary art.

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Contemporary Digital Activism and its Artistic Perspectives

ABSTRACT

The paper explores main categories where art and technology meet in the effort to resist, challenge and interfere with the culture by the use of practices that are opposed to certain aspects of the current social structures. It explores forms and characteristics of social resistance as they are developed today through the use of digital media and in particular the Internet. It examines and analyzes the categories, the characteristics as well as the artistic identity of digital practices that aim to change and reform the existing social structures and explores. It explores the diversity of the practices as well as the features of the identity of the population groups constituting these networks. It aims to define the characteristics that integrate them into the field of tactical media and the ways that are related to the contemporary theoretical frameworks.

KEYWORDS New Media, Video, Body, Internet, Activism.

GENRES OF DIGITAL ACTIVISM

Interventional art is defined by the intention of subjects to intervene collectively and change political, social and economic structures. When interventional art uses practices related to new media, they are referred as tactical media. The classification of these media alternative practices beyond the characteristics of the actions as constituted by the use of the new medium is definitely associated with earlier forms of collective, participatory and dialogical resistance. Some of the major categories of digital activism are listed below, based on the classification provided by Lievrouw (Lievrouw, 2011).

The interpolation, distraction and transformation of meanings, contained in the dominant aesthetic forms of the communication methods of corporates as well as of the folk culture is usually referred as “cultural jamming”. The aim of this tactic is the harassment and distortion of pictures logos of commercial products, promotional posters, billboards, movies, TV spots or other corresponding phrases of advertisement fields in order to alter their messages and create the conditions of critical thinking. By the use of new media and particularly of the Internet, the tactic of harassment and reversal of consumer contents is gaining in momentum and enjoys an unprecedented scale of the spread of the message. A relatively recent example of this category is “The Yes Men” group, which is a culture jamming activist duo and network of supporters created by Jacques Servin and Igor Vamos.

We could imagine a future wider development of such a practice in the engagement and variation of online advertising practices. The subsequent enrichment and extension of the information, which is provided to the public in different themes constitutes another category named “participatory journalism” which includes all online actions aimed at informing citizens through channels and sources that differ from the dominant media. It concerns participatory online practices in which the public in most of the cases is called to interact and participate. It includes blogs and social media sites where writers and readers express their opinions and discuss events and contemporary issues. In this category we can include the empowerment of the expression and the communication of socially excluded groups on matters relating to personal or social conditions such as abasements, dislocations, gender issues and more. An example of this category is Indy media and its Internet-based services that adopted open source and participatory journalism practices in order to provide alternatives to prevailing news and opinions (Lievrouw, 2011).

Another category refers to the developed self-organization and management practices through the creation of open-source communities and the use of code as a force to reveal the imposition of the sovereignty of mainstream media controlled by corporates and the state. The code and as a tool of resistance reaching the limits of sabotage. This category refers to the open source community and the developed practices that promote collaborative and participatory environments where passive users become active by their involvement in software development. Thus, the applications’ development may have far different targets than the ones created by corporate entities. The priorities may be based in creating applications according to essential social needs and not in increasing corporate’ profits as they

are usually orientated. We also refer to self-proclaimed hackers who believe that information technology is a force of progressive social transformation as well as of personal expression. Examples of artists and groups of artists, that practice artistic online interventions revealing the surveillance status of our contemporary society, range from the artist's group called "Critical Engineers" to "Anonymous" which is a decentralized international hactivist group. Another category refers to the ways that various web communities are using the medium to develop collective resistance in the real world. Internet and related technologies seem to be the ideal media for triggering and document practices of social movements of activism. The practice of remix with a series of styles and scriptures have historical references and are synthesized and create new species is the most common practice. In addition this category contains the largest number of posts and videos that exist in social networks. Mobilization is the main way of claiming in all theories of social movements.

MEDIA OF RESISTANCE AND THEIR FEATURES

Each form of digital resistance has developed its own aesthetical identity, which is related to the media used and has either a great or a minimal autonomy from older art forms. Their aesthetical identity is related to the fluidity of the involved media, as results from their continuous technological evolvment, the constant redefining of the practiced methods and tools and finally the continuous expansion of the interaction between technology science and social structures. The media in which digital mobilizations occur, are as diverse, as the areas where technology intersects with contemporary art and social life. This includes photography, video in all its forms, social platforms and blogs, all kinds of interactive online and geographical tracking applications, hacking activities, digital printed material, mapping projections and more.

Video is used as a way of capturing and transmitting personal and collective stories, human rights, abuses, demonstration protests and more. Video is probably the easiest way to disseminate information to the public and is therefore the way to spread the message and trigger collective responses and social resistance. Tina Askanius creates a classification of the online videos (G20) concerning activism, based on their context: videos that call for demonstrations, videos recording interviews of cases, videos that are in the form of documentaries, videos which take the form of an online archive and videos that have the remix feature. Videos vary from raw recordings of everyday moments in urban space to the creation of sophisticated 2D and 3D animations and documentaries. In addition, mapping projections, performance for camera, collaborative virtual environments, video games and more incorporate audiovisual imagery dealing with social issues. Sophisticated promotional documentaries, which incorporate, recorded original visual material, explore the aesthetical potentials of the medium. As far as the recorded original material of mobilizations or small-scale events are concerned, the aesthetical issues discussion usually involves the performative features of the event or the archive that the recorded material constitutes or the arousal of popular art issues.

The important element of the mobilizations of social resistance is the relationship of the body with issues concerning its sovereignty, the freedom of its movement, its gender, and its relation to other bodies, and its position in space. The body is restricted in certain spaces and certain behaviours formed by the dominant ideologies. French philosophers, as Foucault, Deleuze, Guattari and more, identified the body as a central element in the exercise of surveillance and discipline, and they have argued that the matrix of authority is centered on the body. The body is the medium of expressing resistance in physical space. It is not just the medium but also the message of this resistance. The Critical Art Ensemble states that the body in virtual space is constructed by the accumulation of information. It refers to a body without organs, a body made of data, which signals a new form of control. This data body undergoes similar wear and tear as the physical one except that our data body is much more vulnerable since its sovereignty occurs during an invisible process. Our data body is fluid and is augmented daily by the constant gathering of information concerning our daily navigation and interaction, our daily virtual and physical activity, our biometrical condition. Since the data body is under constant surveillance, both the collections as well as the alteration of information that constitutes the data body, create an absolute invisible sovereignty status.

The question that concerns activists is how can a resistance be developed that will regain our dominance over the virtual body of information. While video as a medium is partially related to cinema and its aesthetics have a connection to the aesthetics of the moving imagery, hacking tactics seems not to have an evident relation to off line existing practices, like various forms of activist theatre. However, many activists have made extensive use of theaters' and performances' references to describe their activity. The Critical Art Ensemble claims that the loss of "sovereignty of the individual" can be reclaimed through computer hacking or a postmodern theater of resistance, which utilizes interlocking recombinant stages that oscillate between virtual life and everyday life" (Vlavo, 2018: 75). Critical Art Ensemble refers to the recombinant theatre as a three- theatre combination: the traditional one which is a performance of a scripted play, the everyday life theatre which is related to everyday activities and the virtual theatre as it occurs with the use of digital technology.

Contemporary digital activism has certain features that it basically acquires through the medium used. Some of the predominant features of practices that incorporate Internet as a medium of communication are listed below. Since these movements are created within a de-localized environment (the internet space) the practices are not necessarily linked to people with a common geographical origin but they have the potential to refer to social groups that are beyond the place of the confrontation. Consequently we face the cultivation of collective identities by subjects without a specific geographic reference. Certain identity features are usually created that are mainly related to the developed solidarity. These movements do not usually consist of groups that have the same class reference as it was happening in the past. Instead these online movements are constituted by groups of different economical class references. The educational level of participants is usually to a large extent fairly high. There is an immerse

ability of online movements to activate the mobilization of the many by the one through the dynamics which emerge by the capability that new media have for a global distribution of the information as well as for a local dissemination of their messages. For example the Arab spring social networks have triggered the mobilizations and the protests in Egypt. This is just one of the many cases that manifest the strength that the individuals can acquire through the use of Internet and mobile phone networks. We should definitely mention that the ability of the distribution of the information remains under the control of the corporates that run the corresponding social platforms and provide Internet connections. There is a relative disengagement from any discipline and guideline framework of a group of leaders; in the way we had seen it in previous offline movements.

Online practices involve the participants' subjective experiences, which is definitely of greater importance than the one it had in the classical ways of claiming. The participatory democracy seems to be more apparent and the need for a lifestyle commitment of the participants is more stable. Their reference to mobilization issues concern both global community for major socio-political decisions (for example the 1999 Seattle WTO protests), and small communities for environmental issues consumer habits, eating habits, etc. There are plenty of online campaigns through applications related to everyday activities habits and cultural codes, trying to shape critical thinking through elements that contribute to the formation of memory in a different way. For example "The McLibel case" which was "an English lawsuit for libel filed by McDonald's Corporation against environmental activists Helen Steel and David Morris over a factsheet critical of the company"(McLibel case 2022). There are many possibilities of overcoming the obstacles that either private interests or government entities create in order to prevent the dissemination or the conciliation of information. For example at Chernobyl, in 1986 activists like Tangens managed a rapid and wide dissemination of the real Chernobyl news across Europe and then the world. Despite the apparent anonymity of the Internet, the identities of the individuals that make up the community are more controlled and it is possible that entities may in various ways have a complete record of them. Even though online actions are seemingly invisible, the privacy of the participants is significantly lower. In addition, the potential of total surveillance and control of any online communication is a possible way through which entities that own the social media may trigger confrontations and provoke problems to the on-line movements. These movements usually do not perform continuously but are characterized by a certain discontinuity in the manner of their manifestation. The speeds with which they circulate as well as their ephemeral existence and their low cost production are also some of their characteristics. Finally, hacking practice, as a sophisticated resistance tool, can only be performed by few. It concerns those, who have the necessary know-how enabling them to carry out the process. So in a way, a small group or better a resistance elite usually executes it. Hacking is a practice of resistance that has been denounced. Actually there were only rare cases where courts acquitted the accused hackers.

CONCLUSION

It is important to make a distinction among the generated material created by activists. This distinction concerns the use of the language of the medium and not the message of the communication. It concerns the material that is apparently produced by users who are not media professionals in relation to the material that is produced by artists' groups. It is obvious that in the cases where professionals of the media were asked to create media material, the manipulation of the aesthetic potentials of the medium was completely different from the case in which those with an elementary knowledge of the medium used for communication. Most of the times the communication of the message is the dominant target of the creators while the use of the language of the medium is of a secondary importance. "From this point of view, art activism is seen as artistically inadequate: Many critics say that these artists substitute morally good intentions for artistic quality" (Groys, 2016: 41). On the other hand, the material that is created by artists' groups or individual artists who use new Media as a field of diverse activism, has a totally different form and incorporates aesthetic values that we usually encounter in contemporary digital art. However, a profound knowledge of the language of the medium often leads pioneers to the production of complex, sophisticated projects that do not necessarily incorporate any critical thinking. The latter eventually comes from others who do not master the medium. Nicholas Bourriaud in his book *"Relational Aesthetics"* describing the "law of relocation" refers that "Art only exercises its critical duty with regard to technology from the moments when it shifts its challenges. So the main effect of the computer revolution is visible today among artists who do not use the computer" (Bourriaud, 1998: 67). In the field of digital activism, similar to what is happening in contemporary art, the discussion about the aesthetics is transferred from the field of the final output to the field of the process of participation and mobilization. The aesthetical issues concern the human relationships that are formed during this process and the corresponding models of sociability. Their works "are relational space-time elements, inter-human experiences" and they are "trying to rid themselves of the straitjacket of the ideology of mass communications and places where alternative forms of sociability, critical models and movements of constructed conviviality are worked out" (Bourriaud, 2002: 44).

The possibility of interference through digital activism in the cultural codes of societies is enormous. It seems that a relatively silent revolution is taking place that transforms cultural codes, and creates the right conditions for social change, by interfering both in issues related to everyday life and those concerning wider political ones. Nevertheless, as the possibility of activism through a number of social issues related to the communication of demonstrations, the empowerment of vulnerable social groups and the emergence of human rights violations increases, so does the possibility of increasing its influence at a negative level. We are confronted with the effects of negative digital activism and the possible development of totalitarianism based on the enormous empowerment of digital activities that suppress democratic movements, distort the truth and exercise constant surveillance of the data as well as of the physical body.

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Liminalities of Incorporation

ABSTRACT

The artwork *Spinebone Soup* and *Stuffed Rabbits* examines biopolitical approaches to issues of food, specifically hunger and overconsumption. Studied throughout traumatic periods of history, it intertwines with contemporary ideological understandings of lifestyle, fashion, and wellbeing. The performative aspect of ingestion indexes the role of affect as an alternative expressive channel with a capacity to reach deeper layers of veiled desires and intentions. The artist explores how ingestion habits can create a basis for identity construction, together with its vocabulary and ideology. Then, she focuses on mnemonic dimension and studies how ideas are shaped by disasters, politics, culture, and even family affect understood as liberated consumption choice. She revolves around performative conflict – physical necessities of iterative nutrition and obsessive traumatic repetition of ration terrors. Then moves to realms of pre-identity, where biopolitical status is not yet defined, and where some can find themselves consuming or being consumed. She pursues this metaphor habitually using a figure of an animal – a most subaltern living being. To rehabilitate this oppressive gaze, she comforts herself in the zone of indistinction by creating a speculative cookbook with mixed recipes for humans and non-humans, edible and inedible, cooked to be photographed, and described rather than prepared.

KEYWORDS Bare Life, Biopolitics, Cannibalism, Consumption, Identity, Memory.

INTRODUCTION

In 1998, the curator of the 24th Bienal de Sao Paulo, Paulo Herkenhoff, titled it *Nucleo Historico* (Historical Nucleus) and subtitled *Anthropophagy and Histories of Cannibalism*. It was not the topic itself that attracted my attention, but the perspective which the curator used to revisit and revise colonial processes of Brazilia and broadly Latin America, in other words, Anthropophagy as Cultural Strategy. The subtitle originates from the *Manifesto Antropofago* (1928) by the modernist poet Oswald de Andrade. Andrade made a specific distinction between anthropophagy and cannibalism, where the former refers to the ritualised translation of a worldview through the act of ingestion, whereas cannibalism opposes this spiritual understanding, describing instead the materialistic and disavowing interpretation of it by the Jesuits and colonisers (LaFuente et al, 2015: 13).

The topic of the Biennale obtained another dimension, referencing a work of Eduardo Viveiros de Castro, a famous Brazilian anthropologist, for whom symbolic anthropophagy was a key to study together Amerindian perspectivism and a concept of multinaturalism embracing an idea of multiplicities of viewpoints as an inner quality of reality (Viveiros de Castro, 2014: 16). De Castro redefines anthropology into an independent philosophical system shifting and inverting distinctions between nature and culture, animals and humans, family and social ties; where the problem of being - relevant for Western metaphysics - is replaced by the question of becoming (multiple others) to shuttle points of view; so closely echoing with Deleuze and Guattari's concepts.

Such an audacious and unexpected direction of the Biennale, according to Herkenhoff's reflections ten years after, was not very well received critically and intellectually: "Paradoxically, at the Anthropophagy Biennial, an antithetical reaction was observed - an absolute refusal to discuss the art or show. According to Claude Levi-Strauss, anthropoemic culture, unlike anthropophagy, is one that does not assimilate any exchange with the other, ultimately it involves to vomit" (LaFuente et al, 2015: 60).

Some years ago, I began refusing to eat meat entirely. My objection being based neither on ecological nor ethical grounds, I could only guess at what mechanism of a personal eschatology drove my alimentary choice. The nucleus of *Spinebone Soup and Stuffed Rabbits* is a reflection on the nature of food politics; the transition of biopolitics into necropolitics; the establishment of ethics as a product of dominant ideologies; and the role of trauma, memory, and speech in the shaping of consumer choice. The Siege of Leningrad served as a point of departure. For me, it is not some speculative episode out of an abstract past, but a humanitarian collapse which directly animated my anamnesis. It is a unique, timeless space behind the looking glass, ever-present, casting a shadow across generations. The Siege is an indelible genetic memory, a trauma, a corporeal imprint. It is revealed in sophisticated figures of omission, in the failure to utter, in postures of violence. The food trauma is not only the remembrance of hunger; it is the horror of extreme survival. Forced cannibalism drives destructive memory and legitimises dehumanisation by the power apparatus. Heroic status is bestowed upon those who, deprived of words, are thereafter eaten. The multiple languages of my work conflate different ideologies. References to the archival representation

of plenitude neighbour the familiar tropes of consumerism. The nourishing component of this general approach is reduced to a representation of a shell, a symbol, a signified without a signifier: to a speculative cookbook of words.

FLUID IDENTITY OF MEMORY

There are numerous sociological angles on studying of vegetarianism and veganism. Jen Wrye writes about the discourse of “life politics” which is concerned with processes of self-actualisation and expression of self-identity through consumption (Wrye, 2009: 48—54). It can be an intentional drive to put oneself in a symbolical distance to an animal (predator) and eat vegetarian, which for a human being could mean a more artificial identity construct, neither ‘natural’. It can be non-intentional as acting out - a counter-reaction on dominance and oppression of symbolical load of meat with ideas of virility, vitality, strength, aggression, and sexuality, common leitmotifs of patriarchal approaches to masculine identity construction.



Image 1. Ksenia Yurkova. *Vegetarians Interview* from the *Spinebone Soup and Stuffed Rabbits* Project. 2018. Film still from 1-channel video installation. 41:25. Courtesy of Ksenia Yurkova.

Peter Singer understands vegetarianism not only a symbolic gesture but also a form of boycott, a political act to protest suffering of non-human animals. He uses the term ‘speciesism’, first used by Richard Ryder, which ranks species according to their sentience or usefulness to humans. Singer places this on the same level with sexism and racism (Singer, 1976: 161). Chloë Taylor mentions how vegetarian consumption can work on a self-chosen identity of feminist and cosmopolitan coming along with marks of upper-middleclass status (Taylor, 2017: 319—21). In general, she questions how this status of moral agency can work on the idea of human superiority, and before other humans who stay unreflective in their dietary choice. On the other hand, she notices how statements of vegetarianism can

contradict expressions of ethnic identity grounded in the traditional importance of meat for indigenous cuisines. To a more significant extent, Taylor concludes a shift in the mechanism of identity construction. Whereas for Foucault the main marker of subjectivity was sex (along with various disciplinary and institutional arrangements), here it has been replaced with gastronomy, exploiting its ethical and aesthetic sides.

The task that I gave to my interviewees was the following: to eat their favourite food using their hands and to speak simultaneously. Here I comprehended language as a ‘cultural’ state whereas hand-eating was a sort of ‘natural’ or unconventional (non-cultural) state.



Image 2. Ksenia Yurkova. *Vegetarians Interview* from the *Spinebone Soup and Stuffed Rabbits* Project. 2018. Film still from 1-channel video installation. 41:25. Courtesy of Ksenia Yurkova.



Image 3. Ksenia Yurkova. *Vegetarians Interview* from the *Spinebone Soup and Stuffed Rabbits* Project. 2018. Film still from 1-channel video installation. 41:25. Courtesy of Ksenia Yurkova.



Image 4. Ksenia Yurkova. *Spinebone Soup and Stuffed Rabbits*. 2018. Installation view. Fotoforum Gallery, Innsbruck, Austria. Courtesy of Ksenia Yurkova.

The general direction of an interview was to speculate around the freedom of decisions in general: the ground for the choice of not eating meat in the situations of survivalism. The video pursued two goals: to sort out both ethical boundaries and the level of constructedness of presented identities. I wanted this to be revealed through little disturbances, gaps, and contradictions of mind and bodywork. Not targeting any deductive aims, I was aware that I was working with people of certain sexes, genders, classes, origins, economic situations, and educations. All of these were fairly horizontal to my disposition, so it didn't bother me to integrate among the speakers of a particular habitus. I wanted to leave the effect of this video open, raising more questions, then answering them; as a field, where, in the end, one can see language constructions through constructed editing, interested not in identities but discourse. I study these mentioned presuppositions heading them into the field of the speculative, the place where identity is not yet constructed. Here, individual choices can suffer some contradictions if we speak about issues of survivalism, such as anthropophagy, which is heavily loaded culturally and historically as a transgression and taboo. These can be contrasted with reflections on the consumption of artificial (ethical) human flesh, which would be considered as acceptable - even agreeable and appealing - if the market verified it. My primary interest and obsession is an attempt to register the notion of the indistinction of natural/cultural, human/animal, and edible/inedible. All are traced through a vague traumatic remembrance, through memories of both victim and perpetrator, human and animal; whose footprints can be found on the subcortex of mostly every representative of humankind.

RITUAL AND REENACTMENT

Many theories have been offered to explain the mechanism of how traumas could be transmitted to future generations, for instance, through collective memory (Halbwachs) or cultural memory (Hirsch). Recently, some significant attempts were made to prove it scientifically and interesting enough, that before this publication occurred, significant work on scientific and artistic research Epigenetic reset (2012) was exhibited in documenta(13). Its creator, Alexander Tarakhovsky was not an artist, in the first place, but a geneticist who specialised in epigenetics: in 2014, *Nature Neuroscience* magazine published an article which claimed that psychological traumas are transmitted to subsequent generations by the methyl marks of DNA (Dias & Ressler, 2014: 89—96).

An entangled problem of collective trauma characterises contemporary Russian society, together with memories of official history and the impossibility to vocalise and overcome the shocking past. A similar process was happening to the issue of the Holocaust, which laid the foundation for connecting an idea of a concentration/ extermination camp with the fundamental biopolitical idea of the West. Biopolitics and thanatopolitics equally interested me with regard to the Siege of Leningrad.

The Siege of Leningrad (or the Leningrad Blockade, the 900-days military siege and isolation of the city during World War II) is one of the most mythologised pages in Russian modern history. The Holocaust's problem of the lack of witnesses is equally applicable to the case of the Siege. It is known that only several photo-reporters were accredited to photograph the sites of the city, and all of the images were staged or censored. Private amateur photography was punishable by imprisonment even though there was no official restriction on it. Even after the fall of the Soviet Union, through the present day the archives are not fully available, and lately are becoming more and more inaccessible. Discussions around the subject are monopolised by official rhetoric to please victory paths with redemptive narratives. So far, for already three generations the horrific and traumatic details are destined to be the figures of omission.

According to the few memoirs of the blockades' eyewitnesses, as well as to recently declassified documents of the NKVD (The People's Commissariat for Internal Affairs), more than 1500 cases of cannibalism 'officially' occurred in the besieged city. All accused were sentenced to death. These were the only registered cases among 9500 people detained by the NKVD for protests, and 22.000 arrested by the militia (according to Nikita Lomagin).

It was already not possible to find any coverage in the media of that time -in contrast with Povolzhye famine of 1921 with its everyday scrupulous registering of cannibalism cases-, so this topic was relegated to the domain of urban mythology. Most of the memoirs and diaries were censored, but almost every Leningrad family had some knowledge on the subject: rumours from the neighbours, acts seen in the streets, or even evidence found under their flooring. So far in Russia, this question is not subjected to official discussion. According to Lisa A. Kirschenbaum, the NKVD archives were declassified only in 2004.

In the historical documents of the past and present, omitting causal links, one is likely to find a description of a cannibal as a person who has lost his/her

human face, compared to an animal, and utterly dehumanised. Nikita Lomagin claims that the majority of traitors were nonresident young mothers, having no social connections in the city and appearing as the most subaltern class of the society (Bidlack & Lomagin, 2012: 316—19).

So where can be a place for such a memory, and who, in the end, can witness the catastrophe? Happened to the other and themselves? Shall we delegate a witness role to the one traumatised by his/her own survival and the means of this survival, to the one, deprived of any speech? Or, alternatively, to their possible descendants? Maybe we are these descendants, similarly how Levi-Strauss wrote that “we are all cannibals”? Lévi-Strauss compares reasons of kuru and kuru-like disease affected women and children in both, New Guinea nomadic tribes and in Western world. The anthropologist analyzes how the similar practice named differently served the goal of dehumanization of particular societies. (Lévi-Strauss, 2016: 83—89).

My second *Guerilla Gardening* video was inspired by an archival photograph from besieged Leningrad, made by Boris Kudoyarov in 1942. In that staged picture, one can see three people, a military male and two civilian females harvesting cabbage from the lawn in front of St. Isaac’s Cathedral - the very centre of the historical part of the city. It was a historical fact: to survive severe hunger, people redesigned flower-beds around the city to plant vegetables. On the background of the photograph, one can notice a watchtower with an armed guard, to protect the crops. The most appalling aspect of this picture was a combination of a date with its audacious, explicitly propagandistic photographic language, advertising smiling people surrounded by the abundant harvest. Only the date can index the terrifying statistics of hunger victims behind the happy scenes.



Image 5. Ksenia Yurkova. *Guerilla Gardening* from the *Spinebone Soup and Stuffed Rabbits* Project. 2018. Film still from 1-channel video installation. 13:30. Courtesy of Ksenia Yurkova.



Image 6. Ksenia Yurkova. *Dumpster Diving* from the *Spinebone Soup and Stuffed Rabbits* Project. 2018. Film still from 1-channel video installation. 10:00. Courtesy of Ksenia Yurkova.

Thinking about the testimonies of the speechless, I came across another curious political riddle concerning a zoo located in St. Petersburg. It was decided to retain its former name - the Leningrad Zoo - to commemorate the fact that it was operating during the Siege. It is supposed to become the site of memory, one that Pierre Nora juxtaposes with the official history, a place meant to preserve collective memory. However, here the problem of the lack of witnesses becomes crucial. I started to come across some peculiar information concerning the zoo in the besieged city, - where, according to the repeated narrative, none of the animals has been eaten. Needless to say that it sounds at least grotesque, even not to say obscene: in a city where hundred thousands of people were left to die from cold and starvation, a few hundred animals were kept alive. This mythology is carefully cherished by past and present zoo employees who find no contradiction in the absurdity of such a historical paradox.

Since the real political basis of the zoo paradox has been forgotten, in its remainder we have some weird ‘ruminant’ rhetoric ominously resembling contemporary animal protection discourse. It becomes some reverse redemptive narrative, where a human has to be sacrificed in the name of an animal. “None of the animals was eaten” reminds me of a dream like condition of a certain mnemonic collective which is constituted of past and present zookeepers, blockade kids visiting the zoo that time, and their descendants, the inhabitants of the neighbourhood from different generations, including historians and biologists, whom I interviewed. It works like a collective suppressed memory, or a collective

acting out, as if by analysing that desperate eagerness the informants defeated their common past. It is noted in nuances: by the impossibility to meditate on contradictory details concerning amounts and quality of forages, or speculations about alternative scenarios of zoo keeping. In the end, I noticed surprising non-distinction in matters 'food-for-animals', 'food-for-humans'. Even life inside of cages was shared bodily, and the memories overcoming the threshold human/animal became joint.

In the *Dumpster Diving* video I am wearing a costume of a rabbit referring to a historical anecdote coming from the Leningrad Zoo. To save predators, the Zoo's director invented a method how to trick animals refusing to consume substitutive forage. He would stuff the rabbit's skins, which were kept in storage, with a mixture of grass, hay, and sawdust, adding a few drops of blood or bone stock. Predators reacted on the visual stimuli, tore their puppet prey apart and ate; and thus survived.

COOKBOOK OF INEDIBLE

The core motif of the photographic element is gelatine (or glue) and a collage is the result of its production. Comparing food with language, I'm referring to Dada, and specifically Max Ernst's drawing of the bone-glue preparation. As he, referring to the French word 'colle' (glue), makes a reserve for Dada's cannibalistic poetics of disgust and indistinction, I'm using collage to demonstrate a literal gesture of the conversion of glossy food's depiction into a flip textual constructed side, overturning the glossy ideology of representation.

I keep the matter of gelatine (an animal flesh component) in mind, working with an archive of Soviet cinematography, from the propaganda movies of the 1940-50s to late Perestroika, searching for the aesthetics of food representation. Glueing together the film stills, I am erasing out the subject of my research, leaving only secondary indexes: tableware or hands posture. In the space of the exhibition, these collages become sculptures. By being printed on stiff, translucent material, they refer simultaneously to film stock and a table with dinner leftovers. In a recipe book version, I keep them in the middle of a layout on a small scale - to create a cinematographic effect of distance overwhelmed by the space around.

In the book *Animal Capital: Rendering Life in Biopolitical Times* (2009), Nicole Shukin pays extensive attention to the role of animal components in the film industry. She continues making a contextual analysis how the word 'rendering' (originated from a process of recycling of animal remains) obtained its new meaning in a culture of reproduction, mainly in realms of the mass market.

As an archival reference, I use a notorious cookbook *The Book of Tasty and Healthy Food* - a monument of Soviet alimentary ideology, which was first printed in Leipzig in 1939 right before WWII. The most well-known edition of this book was issued in 1952, a year before Stalin's death. (There's no harm in mentioning that its latest version was published in 2016). This cookbook was a celebration of abundance, an illustration of ideological achievement in a wealthy nation, getting revenge on years of hunger and humiliation, and, of course, a must-have for every Soviet family.

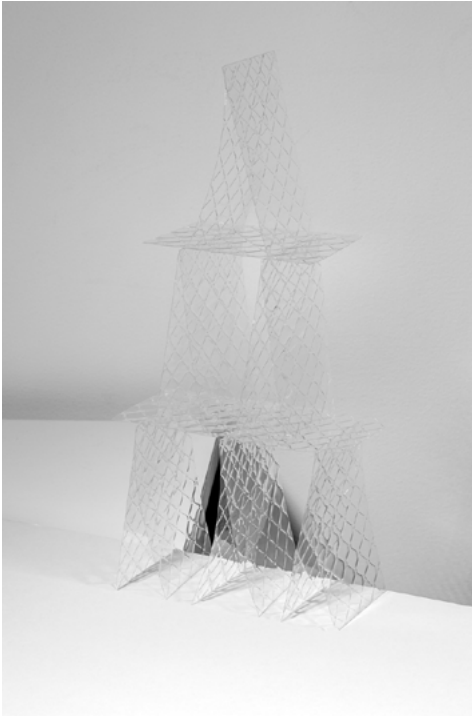


Image 7. Ksenia Yurkova. *Spinebone Soup and Stuffed Rabbits*. 2018. Photograph. Courtesy of Ksenia Yurkova.

It was a serial product back in its time, but looking at the cookbook's still-life illustrations now, I would likely use Benjamin's notion of aura in respect to distance and proximity. The auratic nature of these pictures seems to lie in their ambiguity - they are palpable as book illustrations, but unreachable as an idea of a lifestyle: most of the products mentioned in the recipes were not available in standard grocery stores. It was very close to the concept of simulacrum - you have an image, a reproducible depiction of something that does not exist. The book itself was regarded as a piece of luxury. It was a proper present for an anniversary of marriage - a richly illustrated idea of absence, its visual shell. I recreate 3D replicas of these historical illustrations, displacing their archival context to the post-internet visual culture, rendering the visual shell of a new ideology.

Marina Grzanic uses a term by López Petit - 'gelatinisation' - as a repetitive performative mechanism, equating global capitalism as the only possible social reality. Gelatinisation means reality is covered with obviousness. The form is not hiding the content any more, but the way in which it is presented - through its formalisation - makes the content obsolete (Grzanic & Tatlic, 2014: 139).

Driven by the idea of a shell, of representation without any nutritional value, I write speculative recipes focusing on the real ingredients of a survival kitchen. The point of departure for this content is the scientific studies of alimentary dystrophy and alternative nourishment during the blockade.



Image 8. Ksenia Yurkova. *Spinebone Soup and Stuffed Rabbits*. 2018. Installation view. Project Gallery, Helsinki, Finland. Courtesy of Ksenia Yurkova.



Image 9. Ksenia Yurkova. *Spinebone Soup and Stuffed Rabbits*. 2018. A book's layout. Courtesy of Ksenia Yurkova.

The Siege invented programmatic research submitted by a group of scientists from the Komarov Botanical Institute of the Academy of Sciences of the USSR. These brochures, *Mushrooms and their usage in ration* and *Using in a ration of wild edible plants*, were documents of survival for a starving city, mentioning components that had never been used for food before.

Adhering to a solemnly ironic tone, I mix ingredients taken from diary testimonies, recipes for animals in captivity, and the hunger kitchen of different times and places. Working with the ideas of inedibility and misuse, I convey this approach to another medium. I cast sculptures using some of the mentioned ingredients (like sugar, earth, glue, gelatine, sawdust, and so on) to use them further for photography. This aspiration to misuse I repeat in the cookbook (Yurkova, 2018), whose shape can be described as an inverse or wrongly assembled magazine, enhancing the ubiquitous message of the omnipresent ideology revealed in a pathetic presentation of typography playing more a role of memorial, not a usage guide.

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Neotenous Dark Dwellers *- Lygophilia* Dissection of a Human Gaze

ABSTRACT

This text is a reflection on Robertina Šebjanič's installation *Neotenous Dark Dwellers - Lygophilia* (Šebjanič, 2019) by dialogue partner and adviser to the project Annick Bureaud. The *Lygophilia* is a wider series of 4 research-based artworks initiated in 2017 in Mexico and pursued in Slovenia to explore the love (Gr.: philéō) of darkness (Gr.: lúgē) and the unknown dwellers in places inhospitable for humans. *Lygophilia* weaves together mythologies and sciences, history and future, fears and desires, continents, cultures, humans and non-humans. *Lygophilia* folds and unfolds the stories carried by those fascinating creatures that are the Axolotl, living in the swamps of Mexico City and the Proteus, established in the underground network of caves in Slovenia and nearby karstic regions. Axolotl and proteus are distinguished for their longevity and even more so for their extraordinary regenerative abilities and their maintaining eternal youth in adulthood - neoteny. These characteristics have made them the protagonists of ancient myths, part of cultural heritage, the national symbols of Mexico and Slovenia, respectively, and they have also put them at the centre of scientific research, throughout the centuries, from the description, classification and experiments of the 19th Century to today's high-tech bio-medical research.

Article first published in the hypertext video "Neotenous Dark Dwellers - Lygophilia, Robertina Šebjanic", (Annick Bureaud, ed.), 2019 -

<http://project.memorekall.com//neotenous-dark-dwellers---lygophilia/?w=1>

ARTBOX

In the darkness of the gallery space bathed with, at first, an almost imperceptible sound of water dropping, stand two mobile Plexiglas and stainless steel cabinets. They hold an array of objects and documents, revealing or concealing them depending on where we stand. Even before we come closer, they trigger unconscious references in our mind. They evoke the natural history museum displays as well as the scientific lab glove boxes or the maternity incubators. But, by their very design and aesthetics, they also, explicitly, inscribe themselves into the artistic realm and the art *dispositif* while acting as exhibition display in their own right. They are both the artwork and its exhibition.

Upon closer observation, obviously each cabinet is dedicated to one specific animal. It is also clear that they share some common grounds. However, there is no information provided about what we are looking at. Unless you are Mexican, in the case of the axolotl, and Slovene, in the case of the proteus, you have very little chance to spontaneously name them.

Unlike in a natural history museum, or even in an art show, the exhibited objects do not come with labels that would explain what they are. They do not really provide either an explicit knowledge about the two amphibians. They act as indices, keys to something else: the symbols of the different human gazes toward the animals.

With *Neotenus Dark Dwellers - Lygophilia*, Robertina Šebjanič dissects the way we consider things, that is to say our scientific, philosophical, cultural and ethical ideas, conceptions and positions. It is as much about us as about the animals themselves. There are no axolotls nor proteus in the installation, neither alive nor dead. They have disappeared. They exist implicitly through the expression of our various appropriations, like the shadows cast on the floor by the light on the blown glass sculptures.

There is the animal of scientific knowledge and laboratory experiments with a series of illustrations from different periods ranging from its 19th century description to its 21st century manipulation. There is the cultural animal that populates stories and tales, merging the animals and humans, from the famous Julio Cortázar short story, based on the axolotls from the Jardin des Plantes in Paris to science-fiction and fantasy, spanning high and popular cultures. There is the souvenir animal with olm-shaped chocolates. There is the national animal, and much more. Šebjanič's detailed examination, through the abundance and multiplicity of *human* discourses regarding these animals, paradoxically allows them to regain some importance, a place where they elusively exist apart from us, by and for themselves.

Neotenus Dark Dwellers - Lygophilia borrows from elements of the 19th century. There are the delicate blown glass sculptures that call to mind the famous glass makers Leopold Blaschka and his son Rudolf who in the 19th century created glass marine invertebrates that they sold to universities, museums as well as rich collectors. Whereas the Blaschkas were trying to produce representations of the animals as true as possible, Šebjanič's sculptures do not look for accurate likeness. Although respectful of their shapes and number of their fingers for instance, they are slightly oversized and without any colour. They do not belong to the realm of educational or scientific artefacts but to art.



Image 1. Sketch from Robertina Šebjanič's notebook. © Courtesy of the artist.



Image 2. Part of the Blaschka glass collection, Natural History Museum Vienna with *Aurelia aurita*. Photography A. Bureaud. © Courtesy of the author.



Image 3. *Aurelia aurita*, Blaschka glass collection, Natural History Museum Vienna. Photography A. Bureaud. © Courtesy of the author.



Image 4. Image by Miha Godec. Courtesy of the artist.



Image 5. Strip created for the device by the artist based on a drawing by G. Schneider.

There is the phenakistiscope, a pre-cinema lovely device that we enjoy playing with and even collecting. But the image that Šebjanič has chosen to show is the grafting experiment of Georg Schneider on axolotls. Pure horror. And there are of course, the reproductions of the 19th century illustrations depicting the animals. By stripping them from their classificatory or original functions, by bringing them into the aesthetics field, they shine a light on the splits but also the echoes regarding our (Western) conceptions toward nature throughout the last two centuries.

Neotenous Dark Dwellers - Lygophilia is not strictly speaking a *cabinet de curiosités* which implies an heterogenous collection of strange and remarkable objects and creatures. In the installation, all the objects are coherently related to the two same amphibians. If it were to be considered a *cabinet de curiosités*, then it is one about humans, in the variety, diversity and sometimes strangeness of their approaches toward the animals, nature and the Living in general. With its Plexiglass shelves, its many glass pieces, and the cold brightness of the stainless steel, *Neotenous Dark Dwellers - Lygophilia* deploys an aesthetics of the transparency, clean and elegant, in a sharp contrast with the darkness in which axolotls and proteus live but also the darkness of what we impose on them (as lab animals) and the darkness of their current fate (extinction).

Playing with a crossed mirrored approach where each element, each story, each animal is echoing, reflecting but also diffracting and counteracting the other, Šebjanič invites us to a journey into our cultural gaze and its evolution. *Neotenous Dark Dwellers - Lygophilia* offers the visitors to gain a more profound view of interspecies cohabitation in the contemporary world for a common future.

However with this artwork, she is adding another gaze on the animals, which is also a *human* gaze. The artwork is so to speak looping upon itself: we cannot escape from *our* point of view, the way we look at the others is always from our perspective.

The animals have no idea that now we care about them.

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Getting Muddy Together While Apart

ABSTRACT

In my ongoing practice-based research into microbial life I have been exploring bodily borders, responsible human/non-human collaboration, and our connection to a broader ecology. In my most recent project, I collaborated with microbes, mud, and bodies of water in Berlin to expose the vast array of life in soil and the ways we are connected by it. Alongside this work, workshops have increasingly become an important part of my practice. For Taboo-Transgression-Transcendence 2020 in a livestreamed workshop, I discussed my work with mud and invited participants to create their own mud and microbe-based sculpture alongside artists also engaging concepts surrounding our environment and connections with non-humans: Amy Youngs, and Jennifer Zackin. These workshops, even when virtual, offer meaningful ways to engage webs of connections that extend far beyond our own bodies.

KEYWORDS Collaboration, non-human life, workshop, participation, connection, microbes.

ARTBOX

MEANINGFUL ENGAGEMENT THROUGH WORKSHOPS

Collaborating with the public through workshops has become a way to invite meaningful discussions of my research. Visual art workshops often offer an introduction to a particular material, such as printmaking, line drawing, or ceramics. Workshops can simultaneously be a demonstration of a new way of making, as well as a site for important conceptual engagement. In my practice, workshops have become a means to communicate, connect, and exchange knowledge.

There are many researchers who have found workshops to be a beneficial way to share their research with the public. Toronto based bio artist Tosca Terán has presented numerous workshops on working with fungi. Her most recent, “Multi-Species Entanglements: Forming with Mycelium” was held at the co:Lab nanopod studio (2020): “During this workshop, Tosca Terán introduces participants to the amazing potential of mycelium for collaboration at the intersection of art and science. Participants learn how to transform their kitchens and closets into safe, mini-Mycelium Biolabs, learn how to cultivate mycelium, and leave the workshop with a live Mycelium planter/bowl form, as well as a wide array of possibilities of how they might work with this sustainable bio- material. All materials are provided” (Terán, 2020).

This event taught participants how to grow mycelium in sculptural forms, while at the same time inviting conversation about the role of sustainable biomaterials. The making involved in events such as this engages participants on a physical level, allowing for another form of connection beyond viewing.

In my own practice, I have presented numerous workshops in a variety of contexts ranging from galleries to street festivals. All of the workshops invite participants to make small scale sculptures with mud and microbes. For the workshop I gave at Center [3], an artist-run centre in Hamilton, Ontario (2018), I provided this description: “In this hands-on workshop members of the community and I will create sculptures that use mud as a medium in order to explore the life within it and our connection to it. Participants will be invited to pick from fifteen samples of mud collected around Lake Ontario – including samples from Hamilton, Burlington, and Oakville – and place it into clear tubes along with nutrients that support microbial growth. When exposed to light, the microbial life in the sculptures will begin to grow, and with time, form vibrant marbling across the surface. Participants will be invited to take their five-inch sculpture home and experience its growth first-hand” (Clouston, 2018).

During the workshop, participants and I work together to create sculptures while discussing the role of microbial life in our ecosystem, the liveliness of Lake Ontario, as well as our responsibilities towards it.

The workshop I originally proposed for the conference TTT2020 was a similar hands-on format. With the emerging global pandemic, it became clear that the workshop would need to be adapted to online. Although remote, the event was still capable of creating a sense of togetherness through livestreaming making a microbial sculpture while participants followed along. Also integral to the workshop’s success was the contributions of Amy Youngs, and Jennifer Zackin

who simultaneously made a sculpture and discussed their own perspectives on microbes, mud, non-humans, and living together.

Increasingly, calls for artworks to be exhibited or papers to be presented at conferences also ask for workshops. As part of the programming for *Common Waters* (2019) – an exhibition at Idea Exchange in Cambridge, Ontario – I presented a workshop titled “Grand River: Mud and Microbes.” The description on the gallery’s website states: *Common Waters* is a community project that examines our relationship with water and provides a platform for us to discuss some of the most pressing issues of our time. This project explores diverse artistic, scientific, cultural, and personal perspectives through a curated sequence of art installations, workshops, discussions, gatherings, and excursions. These activations provide a platform for considering our shared waters through the lenses of environment, identity, history, and sustainability (Cambridge Art Galleries, n.d.).

Through providing “activations” of the topic in combination with an exhibition of artworks, the gallery aimed to engage more of the public in serious, but also playful, conversations (Cambridge Art Gallery, n.d.). During my workshop participants who had signed up for the event met at the BRIDGE Centre for Architecture + Design in Cambridge near the Grand River in Cambridge. We all walked down to the shoreline of the river to collect mud from multiple locations along it. During the walk, participants shared their memories of the river, of the development that has taken place, and what architecture was there before. When we got back to the gallery space, we all worked together to create sculptures by placing our mud, along with some newspaper and crushed egg, into the small-sale columns. The exploration of the landscape, being in the presence of the river, and then collaborating on the artwork together stimulated interesting conversations surrounding our perceptions of mud, of contamination, and microbial life.

There have been many iterations of the workshop that are shaped by the environment it is conducted in. The location of the event determines what mud we will be working with – for example, the workshop I presented in Regina worked with mud from Wascana Lake, workshops in Toronto work with mud from Lake Ontario, and a workshop in Detroit worked with mud from the Detroit river. The fact that the participants are familiar with the body of water is important because it provides an opportunity for individuals to feel connected to the material. This of course also comes into play in virtual workshops where participants are often in many disparate locations. In this instance, participants are invited to collect mud from anywhere local that is meaningful to them in some way.

Another factor that shapes the way I present each workshop is the type of space as well as amount of time available. I have hosted workshops in institutional spaces (Idea exchange, The Michigan Science Centre, Grimsby Public Art Gallery, The Saskatchewan Science Centre) as well as in public spaces (Hamilton City Hall, Supercrawl in Hamilton, The Toronto Bentway, Life in Soil Festival in St. Catharines). During Supercrawl, a large street festival in Hamilton attended by thousands of people, participants were asked to fill larger

containers (12" x 4" x 1"), that came together to form a public artwork installed in the Central Branch of the Hamilton Public Library. Similar experiences presenting the workshop at events such as the Sci Art Festival hosted at the University of Toronto, or at the Common Grounds Festival hosted by the Bentway in Toronto, led to a large number of diverse people collaborating with me during short engagements (15-20 minutes) determined by how long they wanted to spend. In other instances, such as in gallery spaces, participants pre-registered and spent a specific, pre-determined amount of time on the workshop. These interactions enable myself and the participants to collect mud together, whereas in the larger scale workshops I have provided all the materials. In all instances the workshops are free to attend.

If artists aim to start a broad dialogue about a topic, it is important that the research be disseminated to many different people. This includes individuals who are comfortable in a gallery space and those who are not necessarily. Theorist Pierre Bourdieu discusses cultural barriers to experiencing artwork in his book *The Love of Art* (1991). Bourdieu states that visitors fear looking at a guidebook or artwork label for too long, in case they might reveal their lack of knowledge to those around them (Bourdieu, Darbel & Schnapper, 1991: 5). Although art galleries may seem accessible to all patrons, Bourdieu argues that there is a difference between the "pure possibility" of accessibility and "real possibility" of accessibility: "if it is indisputable that our society offers to all the pure possibility of taking advantage of the works on display in museums, it remains the case that only some have the real possibility of doing so" (Bourdieu, Darbel & Schnapper, 1991: 51). While pure possibility suggests overcoming the logistical barriers to access such as cost of admission, real possibility refers to the more complex barriers including inequality in education, cultural capital, and overall social inequalities. These inequalities also of course exist in digital space, however a virtual workshop is another venue for intersection that is not as limited by proximity. Through presenting my research in diverse ways I aim to invite many voices into a larger discussion about our responsibilities toward bodies of water as well as our ecology more broadly.

Another reason I decided to begin presenting workshops was due to the disparity between my experience of making the artwork and the experience of viewing it. Creating my sculptures is a messy, involved, physical act. I am very much in the mud, whereas viewing the resulting artwork can make one feel removed from its materiality. I believe that it is important to provide opportunities for us to be in the mud together, even if we need to do so while physically apart. As theorist Maria Puig de la Bellacasa aptly describes, touch can be an important way to connect: "Understanding contact as touch intensifies a sense of the co-transformative, in the flesh effects of connections between beings. Significantly, in its quasi-automatic evocation of close relationality, touching is also called upon as the experience par excellence where boundaries between self and other are blurred" (Bellacasa, 2017: 96). The workshops facilitate contact, perhaps not directly between participants, but between us and microbial life. They are another way to become sensitized to the presence of

microbes, or more generally, the liveliness of all material. Engaging the mud directly while discussing the implications of being enmeshed has led to a diverse range of interesting conversations. These have included discussions about cleanliness or comfort levels with handling the materials, perceptions of microbial life, connections to water, memories of specific shorelines, and ecological responsibility.

A crucial element of the workshops is that participants are invited to take a sculpture home with them to both care for and care about. This extends the care from myself in relation to the artwork towards more people who also have a stake in the health of our waters and environment. I have often had participants ask to take some empty sculptures home to share the experience with other people, such as their spouses, co-workers, or children. The capacity to work in collaboration with participants in getting muddy together is essential to the vibrancy of my research.

While presenting my workshop for TTT2020 concerns had been mounting globally about the impact of COVID-19. It has become even more clear over the past year that borders are porous and that we are all in this together. It is essential that we work collaboratively to understand how to live in connection, how to be responsible in the world we currently live in, and how to move forward in a manner that will be more sustainable while remaining aware of the damage already done. As I impact the microbial life they have also impacted me. It is necessary to understand our interconnection with non-humans in order to act in an ecologically responsible manner. It is also important to recognize harm, while simultaneously attempting to find productive ways to live together. Understanding our relationship with microbial life and recognizing the enmeshed nature of our bodies can push us to foster a stronger, more sustainable, and empathetic relationship with each other and our ecosystem as a whole.

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PAULA BURLEIGH - BYRON RICH

KATHY HIGH - MARTA DE MENEZES - JENNIFER WILLET

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TABOO – TRANSGRESSION – TRANSCENDENCE in Art & Science 2020

Bioscientific Imaginaries at the Allegheny College Art Galleries

ABSTRACT

Historically, popular perceptions of science reinforced clear divisions between the living and the dead, the body and the environment, the human and the non-human. Bioscientific Imaginaries brings together three of the foremost figures in bioart—a practice in which artists use biological technologies and materials as art media—to challenge conventional assumptions surrounding science and its methods. Using strategies of play and humor, artists Kathy High, Marta de Menezes, and Jennifer Willet question commonly held beliefs in the autonomy of the body, revealing it to be but one component in a complex system. All three artists work with themes of gender, sexuality, and love to reimagine scientific imagery and methods. Works on view in Bioscientific Imaginaries explore the ways that science can both illuminate and complicate questions about the nature of identity, relationships, and the body.

For Bioscientific Imaginaries, Kathy High, Marta de Menezes, and Jennifer Willet began a series of communications—love letters—through images and texts about their professional and personal relations, meditating on the discourse they share and areas of tension. Part of these love letters can be read here <https://www.alleghenyartgalleries.com/love-letters>.

Bioscientific Imaginaries was curated by Byron Rich and Paula Burleigh. This exhibition, on view September 15 – November 2, 2020 at Allegheny College Art Galleries, Meadville PA, USA was supported in part by a grant from the Pennsylvania Council on the Arts, a state agency funded by the commonwealth of Pennsylvania and the National Endowment for the Arts.

Text Transcription by: Yorgos Drossos.

ARTBOX

INTRODUCTION

Paula Burleigh: Welcome everyone to the Bioscientific Imaginaries at the Allegheny College Art Galleries. This is a show that Byron Rich and I co-curated, but I would say really that this was his brainchild, Byron is an artist in the field of Bioart. He's brought three artists whom he's collaborated with, whom he knows. Byron, why don't you talk a little bit about the genesis of this show and how this came to be and why it's important right now, at this moment?

Byron Rich: Right now at this moment? Oh boy, OK. Thanks for putting this [the video] together, I appreciate all the work that you've done. This show started with me thinking about where the field of Bioart is right now and what important conversations are being had, especially in the era of COVID-19. And so that reflection made a show that kind of reflects on biotechnology and its place in culture, and some cultural criticism around it – even more compelling. Also importantly, I think, having a show rooted in feminist ideology was crucial to this cultural moment. So, what we did is invite three of the world's most prominent feminist bioartists, Kathy High, Marta de Menezes and Jennifer Willet. Really the show focuses on popular perceptions of bodies and the permeability of human bodies and non-human bodies, and the different ways in which you can use biotechnology as an aesthetic medium to represent larger cultural trends. All three of these artists –who have a pretty diverse set of practices– they all coalesce around these ideas of the permeability of bodies. Marta's work is largely based in tangible, bioscientific research, laboratory kind of like methodologies. Jennifer's is a lot more about the performative aspects around gender and gender construction and the performative nature of biotechnology. And then, Kathy is a kind of a close examination of the history of biotechnology and how some cultural associations are made between biotechnology and othering human bodies from the rest of what we consider "nature".

Byron Rich (continues): Bioart is a relatively new artistic genre. Probably within the last 25 years it's really come to prominence and it's a field that integrates the tools and technologies of the biological sciences and shows how much overlap there is between what we perceive as biological science and cultural trends. It also really tries to lay bare some of the terminology, techniques of the biological sciences to demystify some of the approaches that usually happen behind the veil of expertise. So, that would be within laboratories, within Higher Ed or research facilities that are off limits to the public and try to use, break down the language around these biotechnologies, so that people can understand the cultural implications of them.

Paula Burleigh: Yeah, absolutely. I think, and, it's really fascinating that all of these artists in the show are using biological materials and methods as their media and that, as artists, they're not confined to the kind of traditional conventions and methodologies and science, so that they can be really liberated,

in that sense, to be creative and to ask questions that I think scientists might want to ask but maybe don't have the space to in their discipline.

Byron Rich: Yeah, definitely. I think that's a big role. Every one of the artists that works in here right now works a lot with scientists. And those collaborations are really interesting. Art and science collaborations have historically been rooted in art working in service of the sciences, so, illustration or whatever the case may be. And now it's much more artists actually playing a role in the scientific research, by offering outside perspectives or approaches or questioning long-held traditions in kind of interesting ways. I think that's something that all of these three artists have been super-important in establishing as part of the artistic paradigm.

KATHY AS BOWIE

Paula Burleigh: So Byron, earlier when you were introducing the show you were talking about popular perceptions regarding the body and specifically the permeability of the body. And I think that right now especially, in the midst of a global pandemic, we really want to uphold this fantasy of an autonomous, impermeable body. But all three artists in the show are definitely challenging those ideas and I think Kathy High in particular is thinking about this history of a kind of mind-body divide. You know, since the Enlightenment we've really thought about how it's the intellect that defines a human, that constitutes identity, but she's interested in thinking about parts of the body like the gut and its microbiome and excrement that we often totally discount as being actually, really fundamental to our identity and I think that this kind of project with David Bowie in some ways explores that in really productive ways.

Byron Rich: Kathy, as a long-time admirer and fan of David Bowie, wrote to him, asking him, more or less, "Would you like to do a trade? A stool sample for a series of images of myself dressed up as you?" In hopes of actually doing a fecal transplant, both in terms of making it into an art piece, but also to help with her Crohn's disease.

Kathy High (from a Zoom session recorded at an earlier time): When I'm trying to think through ways of using myself in these kind of performative moments, I consider interjecting commentary into the histories of science, cultural histories, and also introducing feminist and queer histories. I was very interested in the research around fecal microbial transplantation at that time and I thought if I could encourage David Bowie to maybe give me a little bit of his shit, I might be able to, um, embody Bowie by doing a DIY fecal microbial transplant on myself. I'm interested in using my works to think through from the position of the patient, the medical approaches, scientific approaches, and then also to think it through as an artist and an activist myself.



Image 1. Jennifer Willet, *Biosafety Cabinet Puppet Play House*, 2020, Mixed Media, Hepa filter, lab equipment. Installation view, *Bioscientific Imaginaries*, on view in the Allegheny College Art Galleries, Meadville, PA; 2020.



Image 2. Kathy High, *Kathy As Bowie*, 2015, Photographs by Eleanor Goldsmith; Makeup by Jeanna DiPaolo. Installation view, *Bioscientific Imaginaries*, on view in the Allegheny College Art Galleries, Meadville, PA; 2020.

Byron Rich: Kathy in her statement talks a lot about “what effect could a transplant like this have on things other than just physicality and, like, the psychological [aspect]?” And there’s a lot of research on how gut flora affects an individual’s emotional state for instance and how there are correlations made between mental states and gut flora. And I think that’s quite fascinating. It’s also fascinating on a larger degree, that there’s a lot of theories around, or ideas around how human evolution has been partially guided by the microbiota within us. And I think that’s what’s so powerful of this project, kind of talking about what makes an individual. Well, a big part of what makes us human is the non-human that inhabits us. And the project was cut short by David Bowie’s untimely death. With Bioart specifically it’s that the outcomes are so different from the scientific that oftentimes it doesn’t matter whether or not something has fully occurred to kind of put it into the cultural conversation of what is possible.

Paula Burleigh: She didn’t get the fecal transplant and yet here she has taken on some of Bowie.

Byron Rich: Yeah.

Paula Burleigh: And so maybe by way of some kind of influence her psyche is already influenced and altered by Bowie. So, I mean, is it the psychic influence, would she actually change as a human if she had his poop in her? I don’t know.

Byron Rich: Yeah, totally. It’s like non-physical placebo in a weird way that...

Paula Burleigh: ... yeah...

Byron Rich: ... in that it only required of her, merely, like, thinking of it, conjuring of it and she’s taken on the identity. And I think it is such a playful piece in a way, it’s not about... Again, it’s not about a research objective in a way that we think about it with, like, within the science, but instead just, like, an exploration of, like, of potential of how... also of just how does biotech interact with culture. I think it’s like an interesting way to confront that, both using such powerful pop culture iconography...

Paula Burleigh: ... yeah...

Byron Rich: ... along with a biotechnology that is sort of... not reviled but definitely has boundaries of acceptability around even just talking about it.

IMMORTALITY FOR TWO, MARTA DE MENEZES

Byron Rich: Alright, so, in this piece, *Immortality for Two*, Marta and her partner, Luis, each gave white blood cell samples and then those white blood cell samples were introduced to a cancer-causing gene. Interesting thing about cancer cells, are... they’re immortal. They’re only immortal in the presence of,

a kind of themselves, and “unknown” bodies, we’ll call it. So, what they did is actually introduce these now cancerous cells to each other’s cells, affectively introducing another to the culture, which cancels out the immortality. So, they’re no longer immortal and they can die. So, the project is really kind of talking about partnerships and relationships and love and has some interesting metaphors embedded within that. This is very much like a laboratory-based process. Marta and Luis sent over some cryo vials that then had to be cultured and then you can see them here, we worked on a lab with Yee Mon Thu in our biology department to actually get them into these little T75 flasks.

Marta de Menezes (from a Zoom Session recorded at an earlier time): Ever since I finished my painting degree, I’ve been working in laboratories all around the world and collaborating with scientists. So, one of the most important characteristics of my way of doing art is to do it with biology, with living materials and also always in collaboration. I always need a partner. Or more than one partner. And until *Immortality for Two*, I never worked with my life partner. OK? I worked with many scientists, I worked with many fields of Biology, but I hadn’t worked with my life partner, who’s also a scientist.

Paula Burleigh: My understanding is that, because the cancer gene has been introduced to the white blood cells, they remain immortalized, but if they were to co-mingle...

Byron Rich: Exactly.

Paula Burleigh: ... like if the two samples were to be put together, then they would... the white blood cells, which are part of the immune system would recognize the cell of the other as like a non-cell. And they would go into attack mode and they would kill each other. And so, they remain immortalized, but have to stay separate.

Byron Rich: They have [to].

Paula Burleigh: So, the irony being that you have these two individuals who in their 20-year partnership based on, you know, love and mutual respect and collaboration and so the question becomes kind of an ironic question, right? “How does one achieve immortality with one’s partner? And the answer is that you can’t or Marta herself says, “The price of immortality is isolation”. They can only be immortal together but separate. And yet we have the projection of the cells and notice it’s overlapping. And so in this kind of speculative, projected virtual sphere that is created for the show, then they can achieve that immortality together in this specific, strange, kind of fictional space.

Marta de Menezes (from a Zoom Session recorded at an earlier time): In a way, one of the major issues I think most people have with microbes and the invisible world and of organisms that inhabit us and inhabit this planet

with us is a problem of scale and I think that bioartists have been dealing with that issue for a long time and we've been working in labs and... and just what Jennifer [Willet] said, we are not scientists, so entanglement has always been our language anyway. Somehow it felt a little bit like we were more at ease to deal with all the questions we had, just enough knowledge to be able to read the good sources and try to understand a little bit more of what was happening but also the ability to connect the scales and the fields really gave us, I think, more confidence and less of a panic, I think, in dealing with all of the horrible news. And also we're a community in a very real sense. So, all of those meetings that we had every week would also allow us to just... just support each other through conversation.

BAROQUE BIOLOGY (PAPER THEATRE), JENNIFER WILLET

Byron Rich: So these are such lovely, actual tangible art objects, which I find super fascinating and conceptually I love how Jennifer Willet is depriving this really human-centric way of thinking about interactions with nature, kind of like how we're separating us from everything else, and just the process by which she kind of inoculates these peachy dishes and puts them overtop of these paper cut-outs and allows these inoculated plates to kind of take on the life that they've been inoculated with, obviously, but affect the aesthetic considerations and compositions of the work behind them.

Jennifer Willet (from a Zoom session recorded at an earlier time): I had to quit working in other labs, to be really careful, because they're really doing important research –and I mean it's really important, like people are curing cancer- and I don't want to contaminate their research with my dance routine [mimics dancing] in the lab. Uh, so what I did is I built my own lab, I got a job at the University of Windsor, I took a good ten years... So, this is a new lab, this is a BS Level 2 Laboratory, and it's a lab but it's also a theatre. The pieces that you can see in the show on *Baroque Biology (Paper Theatre)*, I'm really circling around this idea of a theatre or a set design and using theatre as a way to imagine our relationship to biotechnology and our performance of biotechnology. So, in this work I work with a set of students and we set out, I set out a list of all the different techniques we want to try and then we, together, sort of go back and forth and back and forth and eventually, after two or three years, this is the work that we came to. What I'm interested in doing is mobilizing the laboratory model and that means the physical space but also the organizational space but towards artistic ends, towards inclusive, diverse, feminist ends, and towards creating this sort of, like, shared narrative around biotechnology.

Byron Rich: Well I think it's a really lovely pairing with, well, both Marta and Kathy's work, but I'm thinking right now about Kathy's work with Bowie and thinking about the non-human actor as playing such a central role than we

usually kind of marginalize or totally exclude from the human experience, quote-unquote, whatever that is, but then at the same time, playing on some of the things that Marta uses around the performativity of the Bio lab and of the biological sciences. And the much larger, grander theatrical gestures of living, like, of immortality, for instance.

Paula Burleigh: I mean, when we think of the Baroque era as a historical period of art and theatre – it's when the opera was invented, I mean it's a period of drama and emotional excess. It's about sort of getting your viewer to relate, based on sort of getting them in the gut by reaching out to those core emotions and that maximalist aesthetic is not something that we typically associate with the biological space of a laboratory. Which like you said, I think of it as being sterile and austere and resolutely minimalist and pretty masculine. She's very affront about the fact that these look like feminine objects -not to double down on a gender binary-, but, you know, they're super colorful, they're over-the-top, I mean there's something campy about them, a little bit. And so, this idea that she's using femininity in the service of feminism to make us think about why is that we associate the laboratory with a space of masculinity, what does that say about the field of science and our associations with it.

BIOSAFETY PUPPET PLAYHOUSE, JENNIFER WILLET

Byron Rich: This is the *Biosafety Puppet Playhouse* by Jennifer Willet. She's really playing off the cultural tropes of masculine versus feminine aesthetics, which of course so often, the cleanliness, the sterility are thought of as the laboratory and are thought of highly masculine, whereas the kind of playful, colorful, really richly decorated aesthetics of this installation are meant to kind of be more representative of... a feminist science fiction. The piece is really just about actually getting in here and engaging with the tools and technologies of the biological sciences to reinforce the idea that so much of it is performative and is designed to almost be exclusionary in a way. And so this piece helps the viewer, and helps the participants to break down the tools and technologies in a much more friendly, playful space.

HISTORY OF SHIT, KATHY HIGH

Byron Rich: This is *The History of Shit* by Kathy High, and it has quite close ties to a 1978 book by French psychoanalyst Dominique Laporte, who traced the evolution of the human relationships to their own waste and how that can be directly tied to the state of the modern psyche. In this work, Kathy just kind of makes a really compelling case for how humans have this tendency, especially since [the] Enlightenment, to separate ourselves from everything else, to separate ourselves from the biological processes that define us, to separate ourselves from other non-human living things. And through this, she makes a really strong statement about the things that we leave behind, like the waste of humanity, whether or not that's actual shit and excrement as she says, or other

forms of waste and how that is really, closely related to defining where we are psychologically and who we are as a culture. And [it] really says more about us than the things that we produce and cherish and hold dear.

CONCLUSION

Paula Burleigh: Well Byron, I think a nice way to conclude might be to talk about this project that the three artists embarked upon for the show specifically. Something that I always think about when I'm in an exhibition is what do we gain from seeing all of the artworks not just on their own but in conversation with one another. We've been talking a lot about how bodies are not autonomous. We exist in these kind of interconnected networks of exchange, we are permeable to our environments, and I think that all of those issues which are crucial to the work itself really come[s] to the fore in this pamphlet that you're holding which our visitors who are remote can also read online.

Byron Rich: Cool, yeah, I think so too. It's... one of the things that I've loved the most about the show –and I think is most amazing about it is that we brought together three friends, that have been friends for so long. So, the show isn't just curated based upon discipline, interest or anything like that but it's actually three people coming together. And I think it's really interesting what you said a minute ago about identity being formed by the relationships we make and the way that exists in the artworld as kind of being in the margins. But this really, I think, works with the theme of the show: ideas of love and care and nurturing and how it's manifest in this little document that you can read online in these many love letters between the three artists.

Paula Burleigh (to the camera): Those of you who cannot visit us in person can see videos from the show online, installation photographs... Write to us if you have questions.

Byron Rich (to the camera): The show has come together is quite lovely and I think that this would be something that would be fun to see in other places. So, feel free to reach out to Paula and me and we'd be delighted to talk more about it.

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Golem

ABSTRACT

During a webinar held in March 2020 on curating contemporary art* I was asked by one of the participants if I had any advice on how to be creative during the Lockdown period. My answer was that in times of emergency, such as the one we live in, the problem is not being creative in solitude, but rather, to try to generate positive changes through the projects we carry out, acting with the aim of generating a different reality. The GOLEM, as a concept, was born from this reflection.

In May, the Trojan Dao Foundation asked me to curate an artistic event in live streaming to raise awareness about the fundraising for the “Hellas COVID19 3D Printing Supplies” program**. The latter aimed to contribute to cover the cost of supply raw materials for 3D printing of protective masks for the medical and nursing staff of public hospitals. This offered the possibility for the GOLEM-concept to materialize. To my invite to participate in this initiative answered generously the following artists: Adonis Adoniou, Yannis Adoniou & Andrius Mulokas, Nicola Fornoni, Lucia Bricco, Athina Kanellopoulou, Kängela Tromokratisch, Marta Lodola & Valerio Ambiveri, Andreas Papamichael, Yannis Pappas, PASHIAS, Bill Psarras, Marcel Sparmann, Angeliki Chaido Tsoli, Fillipos Vesileiou, Kostas Voulgaris, who joined in the live streaming programme which took place on June 5, 6, and 7 (2020). At the same time, the following artists were invited as Guests of Honour, and contributed to the event with their works to realize the movie GOLEM: Dimitris Alithinos, Marilyn Arsem, Franko B, Francesca Fini, Francesca Leoni, Francesca Lolli, Guillermo Gómez Peña, Leda Papaconstantinou, Stelarc, Theodoros, VestAndPage.

ARTBOX

SAVE THE SUBSTANCE, FREE THE FORM.

It can be said that the World Wide Web is a non-place that begins to characterize itself as a place according to how it is frequented or used. I could compare it to a shapeless container, which is potentially capable of forming / deforming any content if it is not used with awareness of intent. During the first lockdown, due to the severity of the limits imposed by the pandemic, the territory / non-place of the web has taken an enormously amplified importance. In this social / practical / theoretical context, I thought of the GOLEM as an opportunity to give life to a performative event capable of transforming the technical and formal limits imposed by the web. In the foreground there was the opportunity to participate in an act of solidarity (Kiais, n.d.) - the subtitle "to be generative in solidarity rather than be creative in solitude" spoke clearly in this sense - but at the same time, the conceptual and emotional significance of the single action performed by the artists took its own weight beyond the general aim of the event.

BODIES – ANTIBODIES

The event consisted of 2 parts: a film composed of several videos of the *Guest of Honour* artists (Kiais, n.d.), followed by a live streaming event of performances and performances for the camera. In my opinion, all the presences gathered in the video screen should be perceived as episodes of resilience in the context of a contradictory process of transformation that has been underway since the 1970s and that we call globalization. This last has been a process of rapid and violent change, which has now reached its peak profoundly conditioning every culture and society, and which I identify with the metaphor of the Golem¹. We now live in *augmented* societies and cultures, implemented on a planetary level in the same social, informational, political, and financial environment, like different interdependent parts of the same organism. The strength of this global organism can cyclically turn into negative, catastrophically, as the giant of myth. Art and artists act as antibodies of this organism, processing its ills.

In this conceptual context, the event GOLEM – *to be generative in solidarity rather than be creative in solitude* presented both the video and the live streaming interactive installation *Reclining Stickman* of **Stelarc**² in which the human figure

¹ "Golem [from Heb. *golem*, properly: "embryo"]. – Mythical figure with human features, typical of the Jewish kabbalistic tradition, which is believed to have been created from a clay mass"... "and which can be evoked by reciting a combination of alphabetic letters" (Source: Treccani Vocabulary). It has also been taken up in cinema, fictional narrative and philosophy as a metaphor for the potential destructiveness of human artifices According to the myth the Golem has written on the forehead the word "truth" (in Hebrew *emet*) which keeps it alive until one of the letters of this word is erased, turning it into the word "dead" (in Hebrew *met*). It is said that its creator, at some point, lost control of it, and that the clay giant, instead of defending or being useful, began to destroy everything, and the only way to stop him was to transform the word "truth" in "dead".

² *Reclining Stickman*. Stelarc, 2020. Acknowledgments: Wayne Michell, Ternay – Design Engineering; Mark Harrison, Festo – Pneumatic muscles and technology; AITI, Flinders University – Robot fabrication; Steve Berrick – Interactive software and electronics; Steven Alyian – Technical Coordination, Audio and Video Streaming; Leigh Robb, Curator 2020 Biennial of Australian Art. (STELARC, n.d.)

is placed in a mechanical giant like in a new Vitruvian Man³, metaphorically positioned the centre of today's technological cosmos. Stelarc places the human in a creative relationship with technology, here in antithesis with the *Golem* as negative metaphor of the destructive technological strength of our societies⁴.

The video of **Theodoros**, sculptor (Papadimitriou) presented here was composed of different fragments of a television broadcast on his artistic work⁵. In one of these fragments, we see Theodoros raising up the phallic symbol of technological, military and police power (the sculptural object “Matraque”), between the Twin Towers in New York, 1973. In that happening Theodoros evokes the violent repression by regimes of all kinds, of the workers' and students' movements born in 1968; a practice that we have seen repeated everywhere in the last decade of “crisis”. Theodoros confronts the Golem using its main medium of mass conditioning - television - and making it a medium of sculptural creation and political action through an artistic performative gesture. Other artists in that period involved the TV in their actions and installations but few are the artists who conceptually used television broadcast as an artistic medium⁶.

Another video-performance which is capable of *freeing the form* given by the medium, and thus *saving the content*, is that of **Leda Papaconstantinou**. She realized the video “Genet's toaster – Homage to Jean Genet”, 1997⁷ with extraordinary sweetness towards the body/the bodies, creating a territory of encounter and discovery, of reciprocal trust, confidence, complicity, curiosity. The playful images are freeing all what concern the individual from prejudice and conformism. The nudity in these bodies shows their naturalness; what they are not dressed in is the current body image, socially shaped and imposed by social media.

3 About: Vitruvian Man. This figure has been summarized and renewed in one of Leonardo da Vinci's most famous drawings and sees a male human figure inscribed in a square and a circle, symbols of the material and metaphysical worlds; in this way the human is symbolically placed at the center of the universe.. Gallerie dell'Accademia, Venice, Italy.

4 Kindly refer to the note 2.

5 Theodoros, sculptor (Papadimitriou): “Tilehirismos” (Remote Control) 1976. Excerpt from the show “The creators: Theodoros - Sculpture 1970-1974” by George Emirzas, ERT, December 15, 1976. Courtesy of the artist's estate]. (ΘΟΔΩΡΟΣ ΓΛΥΠΤΗΣ - THEODOROS SCULPTOR, n.d.)

6 I am referring, for example, to the installations of Joseph Beuys “Filz TV”, 1970, and Nam June Paik “TV Buddah”, 1974. Also: Chris Burden, broadcast in the USA a serial of performances: “TV Commercials”, between 1973 and 1977. (Art, 2013)

7 Leda Papaconstantinou: “Genet's toaster – Homage to Jean Genet”, 1997 (Courtesy of the Artist). 11' 20". Performance and camera: Leda Papaconstantinou, Carmen Garcia Bartholome, Paul Kourousis. Music supervisor: Theodoros Sarantis [Μουσική επιμέλεια: Θόδωρος Σαραντής] Tangos from Argentina, recorded in the early 20th century [Αργεντινικά τανγκό, ηχογραφημένα στις αρχές του 20ου αιώνα]. Edited by Dimitris Ioannidis. Titles by Lorenzo Seseri. Facilities and postproduction: Mangos Salonica. Producer: Nikos Giannopoulos. The video is also part of a multimedia installation which features in the collection of the Macedonian Museum of Contemporary Art). (Papaconstantinou, n.d.)



Image 1. Stelarc. Reclining Stickman. 2020. (Courtesy of the artist).



Image 2. Theodoros, sculptor (Papadimitriou). Still frame: excerpt of a happening, New York, June 1973, part of the video presented during the event (Courtesy of the artist's estate).



Image 3. Leda Papaconstantinou: still frames from "Genet's toaster – Hommage to Jean Genet", 1997 (Courtesy of the Artist).



Image 4. Dimitris Alithinos (GR). Still frame from "Preparation for Social Adaptation", Paris 1976.

In the video of **Dimitris Alithinos** “Preparation for Social Adaptation”, Paris, 1976⁸ we can see how an act of care can be read as an act of preparation of each individual, still unconscious of him/herself as such, for his/her entry into society. The defenceless body of a new-born is at the mercy of the context in which it is born; conditioned by predisposed spaces and situations created to lead him/her to assume a given social identity. That defenceless body of a new-born represents the possibility for every destiny, in every age, to become an individual destiny or a *massified* destiny. Standardisation of destinies is what globalization has turned to be.

The performance of the three artists **Francesca Fini, Francesca Leoni, Francesca Lolli**⁹, already broadcast in live streaming on April 4, 2020, was involved as a video performance in the video screening program of the event. It is a triptych where three distinct live actions develop simultaneously, in three distinct places which, thanks to the live streaming, have become one place. The aesthetic strength of this triptych has overcome the limits of the individual confinement by requalifying the medium used to do so. It was an artistic intervention in the *social space* of the web in total harmony with the nature of the performative event *Golem*.

The same happened with **VestAndPage** (Andrea Pagnes and Verena Stenke). When I invited them, they were working on a video that was conceived in September 2019 and that referred to Verena’s experience of clinical isolation for tuberculosis: the central sound element of that video was the breath¹⁰. Furthermore, there is a scene in which both artists are present in the same space next to each other but divided by transparent glass bells. The glass allows them to see each other, but do not allow them to have physical contact. Through a disease experienced individually, we confront ourselves with our own personal limits, while the pandemic brought all of us to confront with an imaginary collective breath at the planetary level. In this artwork, the possibility of collective salvation arises from a personal condition that led to a poetic and reflective gesture.

8 Dimitris Alithinos: “Preparation for Social Adaptation”, Paris 1976, Video AKAI ¾, Dur. 2 min 20 sec. (Ψηφιακή Πλατφόρμα ΙΣΕΤ : Artists - Alithinos Dimitris, n.d.).

9 Francesca Fini, Francesca Leoni, Francesca Lolli (IT). *LOCKDOWN*, 2020, 26’16”. Recording of live streaming performance for the virtual exhibition “My Name is Francesca”, 04/April/2020. (Contemporary Art | Francesca Fini | Roma, n.d.) (Francesca Leoni - Film Director, Music Video Director & Art Director, n.d.) (Francesca Lolli, n.d.).

10 VestAandPage. “Amor and Psyche (In Times of Plagues)”, 2020, 9’24”. A video performance poem structured in four chapters (Conditio – Status – Echo – Mutatio), approaching chemical, physiological, psychological and spiritual aspects of Breath. It has been initially conceived in September 2019, during Verena Stenke’s three-weeks clinical isolation for tuberculosis and the initial phase of the subsequent therapy. The video displays original MRT and CT thorax scans of this period – her “inner portraits”. The work has been resumed and actualized during the SARS-CoV-2 pandemic in May 2020 (Live Art | VestAndPage - Verena Stenke & Andrea Pagnes | Germany, n.d.).



Image 5. Francesca Fini (on the right), Francesca Leoni (Centre), Francesca Lolli (on the left). Still frame from: LOCKDOWN, 2020 (Courtesy of the artists).



Image 6. VESTANDPAGE. Still frame from the video "AMOR AND PSYCHE (In Times of Plagues)", 2020.

Guillermo Gómez-Peña constantly hides and reveals in this moment of reflection entitled “Mirror dance”¹¹. The dance of feelings and sensations related to a lived life can happen only in the tension of an open introspective gaze. The video camera’s eye meets Guillermo’s gaze as a mirror, letting us enter a world of unspoken memories and emotions that do not belong to us. We meet his eyes, feeling a tender indulgence toward a *self* which has been generously overexposed to life. It could be me; it could be you. The project’s title of which this video is *part 1* is “Dancing With Fear”, and it is more pertinent than ever. Each individual is confronted with the fear induced by the last diseased product of the Golem-system; the dance with the invisible body of our fears leads us to instinctive movements, to draw unexpected paths: a route that cannot be read by the omniscient eye of the giant.

Marilyn Arsem also induces to a tender indulgence towards materials, time, and our own presence. Her figure is an alchemical filter capable of transforming the temporal perception of those who stop beside her while she performs. Like when she pours a mound of black sand from a raised surface to the ground (day 95: Black sand)¹². The process of transposition occurs as in an hourglass and over time transforms the heap of black mass from a powerful wall to an inexorable aura for our next steps. In the confrontation with death, the process of its elaboration cannot lead us to overcome it or forget it, but it can lead us to live with it. In diametrically opposed direction goes the performance “Salt” (Day 99: Salt) in which it is Arsem who transforms and lies next to a reflection of herself, a heap of salt of her size. I think of salt on earth as the ghost of an ocean that has evaporated and leaves a luminous memory of itself. Another aura is revealed, another chromatic weight to discover. Arsem’s non-gestures generate space and set time free.

The Golem also presented the video of the performance by **Franko B** AKTION 398¹³. People were involved a one-to-one confrontation with the artist in a specially constructed room in the centre of the gallery. The audience booked a time slot in advance, taking a number and sat in a waiting area before being led individually into the room by one of Franko B’s assistants. This performance brings an individual into the position of being observed in a moment of physical and psychological humiliation. In the aggressive appearance of the wound specifically inflicted by a nurse on the artist’s abdomen, there is a force that keeps us away and calls

11 Guillermo Gómez-Peña’s video (Mirror Dance, 2020) is part of a Film project in progress: “Dancing With Fear”. “*The project began in 2014 and it is more pertinent than ever. The complete series of 6 video performances deal with Body Politics, The Aging Body, Fear of Illness, Love Gone Wrong, US/Mexico relations and the tensions between performance art and the mainstream*” (Guillermo Gómez-Peña, n.d.).

12 Marilyn Arsem (US). *100 Ways to Consider Time (excerpts)*, 2015, 6’06”. *100 Ways to Consider Time* has been presented by Marilyn Arsem at the Museum of Fine Arts, Boston for six hours a day, every day, for 100 days – an invitation to pause and experience the present moment, providing a temporary respite to the frenetic pace of our modern lives. (*Marilyn Arsem - Performance Artist & Founder of Mobius*, 2018).

13 Franko B (UK/IT). *AKTION 398*, 2000, 4’01”. Video of the performance by Franko B, with Ernst Fischer and Stuart Barclay. Infinito Ltd. Gallery, Turin – June 2000, Video by Claudio Cavallari. A One-to-one performance (1998 – 2002) © 2015 Franko B and the contributors (B, n.d.).

us closer: a twist of the feeling of repulsion that becomes acceptance; scandal that becomes listening; refusal that becomes solidarity. The aseptic figure of the masked nurse introduces us to the helpless presence of a body that seems to take on itself all ills, and with which we find ourselves face to face.

In the context of the event these two figures are merged with the metaphor of myth becoming a Golem, a synthesis of ethical contradictions, a never-ending infliction of non-curable wounds, to other humans, to the natural environment, to other species.



Image 9. Franko B. AKTION 398, Infinito Ltd. Gallery, Turin, 2000.
Photography: Jolanda Kempers.



Image 7. Guillermo Gomez-Peña. Still frame from “Dancing With Fear”-Part 1: “Mirror Dance”, 2020.



Image 8. Marilyn Arsem (US). Still frames from “100 Ways to Consider Time”, Museum of Contemporary Art, Boston 2015.

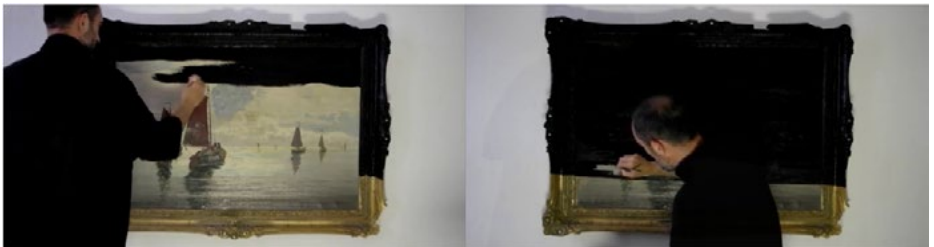


Image 10. Yiannis Pappas, Degenerate Nocturne, Berlin 2020.

BODIES – ANTIBODIES

Suddenly we have rediscovered forgotten qualities of time, such as duration and depth. Suddenly, silence in our life took more space: an unwanted space, born in a time without horizons. But silence also lets questions arise. Suddenly we discovered that our silence gives more space to many things beyond human being, but also to ourselves: to the meaning of words, to the concern for the condition of the other, to nature, to a sustainable technology, to think collectively, to act differently than usual, to the desire for a better condition. By contacting the artists of the live event, I had placed these topics to which they could approach freely:

Breath, water, earth: elements with which, in everyday life, you can create and shape. Mythological elements of the creation of the human.

Mirror, wind, salt: illusion, taste, thought, aridity.

Time, night, air: the promise, the falling, the rising hope.

The hybrid, the machine, the angel: death, regeneration, dream (utopia / dystopia).

The city, the other, the fear, the beauty: body and antibodies, the clash, the encounter.

They all responded generously by creating a work specifically for the event and interpreting the arguments given. Here are shown some of the interventions (Kiais, n.d.)

In his action¹⁴ **Yannis Pappas** covers a painting with a nocturnal black. Does he deny history by drowning it in the density of black oblivion? Is he censoring another artist? Or does he provocatively participate in the artistic and historical process initiated by that painting by transforming, not destroying, the work of an individual who participated in one of the worst ideological crimes of the last century?

In *Non-human distance*, **Marta Lodola** and **Valerio Ambiveri**¹⁵ found the intermediate point between Berlin and Bergamo, which is Berching (Germany), and there they virtually met on May 6, 2020, at 18.00 through Google Street View. Berching is the birthplace of Christoph Willibald Gluck¹⁶, and they choose to play Gluck's "Orpheus and Eurydice" of 1762 as an element of their performance. Another example of poetic overcoming of the limits of the medium.

14 Yannis Pappas – Degenerate Nocturne. Ernst Hugo Eduard Lorenz-Murowana (born October 27, 1872 in Murowana-Goslin, † April 22, 1954 in Berlin-Neukölln) lived and worked in Berlin as a freelance painter and also as a restorer. After completing his studies, he became a certified Aryan member of the Reich Association of Fine Artists in Germany and later in the Reich Chamber of Fine Arts in Berlin. The work "Fishing Boats in Southern Sun" (around 1945) was found in a Berlin's rubbish pile by the artist and art-conservator Yannis Pappas in 2020. The performance "Degenerate Nocturne" catastrophically blackens and rejects an artwork and a story of an artist seen by dilettantes' Nazi admirers and the way in which art is beautifully depicted. Leaving a strip of the original painting and its frame, as well as the artist's signature as a "witness" to a constant degenerate search for 'high Culture' and ideal of classicism. Concept-Performance: Yannis Pappas. Music by: Dimitrios Dafnas (DE), Konstantinos Georgiou (GR), George Chondropilas (NL) (*Yannis Pappas*, n.d.).

15 Marta Lodola e Valerio Ambiveri, *Non-human distance*, 2020. (Lodola, n.d.) (*Valerio Ambiveri*, n.d.).

16 Christoph Willibald Gluck (Berching, 2 July 1714 - Vienna, 15 November 1787) was a German composer, one of the major initiators of Classicism in the second half of the 18th century.



Image 11. Non-human distance – Marta Lodola/ Valerio Ambiveri, 2020.



Image 12. Dissertazione – Lucia Bricco



Image 13. Marcel Sparmann – Moon-Structures, 2020.

Lucia Bricco “Dissertazione” (Dissertation)¹⁷. All that we have been missing: air, wind, open space, a shore, and a light-hearted conversation. So light that we are finally dematerialized in the wind and are constantly dispersed elsewhere. An elsewhere that saves the poetry of non-portrayable moments.

Continuing to follow the semantic flow of this dispersive system of signs we arrive at **Marcel Sparmann**'s deserted moon¹⁸, apparently, a silent mirror of our solitudes. The closure between four walls becomes the place of a daydream in which everything, is poetically involved. Suddenly we all find ourselves in the icy warmth of Sparmann's tongue on which the moon / ice rests. Its craters are made of flowers imprisoned in the poet's breath. We see the unspeakable: another little miracle that overcomes the limits of the medium.

Andreas Papamichail created a potentially uncontrollable fire¹⁹. All around is combustible material. It is a fire that is always ready to expand. A fire that destroys and does not regenerate. Globalization is imploding violently. The Golem burns and we burn with him.

Dragonfly is a video created by **Nicola Fornoni**²⁰: a dream of flight and freedom through transformation. A metamorphosis toward a better condition. The images refer to personal conditions but redirect to a universal dimension. Are we able to bring the giant, the metaphoric Golem, to a metamorphosis toward a better condition?

CONCLUSION

The artworks / actions had the strength to free the medium from its limits, offering its poetic rebirth and freeing the *political* depth of the event. I must stress that I mean “political” not in the classical ideological sense, but in the sense of “that which concerns the *polis*”²¹. The political idea understood in this sense does

17 Lucia Bricco: Dissertazione (Dissertation), Duration: 25', Materials: sea, clothes, sticks, string, wind. “*Dissertazione (Dissertation) is a speech in which the words used between the interlocutors, and so their movements and their demonstrations, coincide with the argument of the discussion: the deformity of words*” (Lucia Bricco, n.d.).

18 Marcel Sparmann: Moon-Structures. “*We've been eating for days, every day and every day it gets more. I assume we are also feeding the table and the chairs, the floor, the walls. They all take part and swell. The chair and the table are words that grow with us. They can be easily removed from the shelf and inserted for anything. If necessary, also in the crook of the arm, under the bulges and mountains, under the valleys of the stomach, tendons and muscles. They form a landscape. Our kitchen has become a landscape, depopulated like the moon*” (Sparmann, n.d.).

19 Andreas Papamichail: Eastern Mediterranean Straw Bale. A video showing a straw bale in an agricultural field context in Cyprus. The action's final shape of the artwork is materialized in a video playing in a loop, showing a straw bale already set on fire, at the stage of full flame -a stable flame state throughout the video. This action is examining two separate but connected issues. Firstly, the burning bale geologically and ecologically depicts the portrait of the human epoch. Geologists have called our era the Anthropocene, the time when human aggression on the planet has outranked geological forces. More developed civilizations appeared at this point, but Anthropocene's point in the history timeline is seen here not as the beginning of our species but rather, with the advent of modern capitalism. Humans seem to have been obliterating our planet -a planet on fire- mistreating nature as a raw material.

20 Nicola Fornoni. Dragonfly. 2020. (Nicola Fornoni | Nicola Fornoni | OfficialWebSite | Brescia, n.d.)

21 Pòlis, from the Greek πόλις “city”, has been initially a new form of organized coexistence in an urban sense, which in the Western world represented an ideal model reference for the conception of public space, in physical, cultural, and political terms. Also in modernity, until recently, the concept of urban coexistence was influenced by that model at all levels.

not aim to *divide* into the clash with “the other” but to *unite* in the difference, in the possibility of civil coexistence, and in mutual tolerance and solidarity. In this sense the Golem has been an act of co-citizenship in the non-place of the network, finally made an *agora*²²: a shared place for the citizens of the globalized *polis*, rather than mere territory for data transfer from one place to another. An *agora* that becomes *theatre* in the original sense of the term, understood as the place where a community gathers and reveals the brightest and darken aspects of itself, expressing (ideally) free from prejudices and unnecessary attitudes of conformism and political correctness. In addition to the interventions of the artists, the participating institutions / organizations²³ gave a strongly delineated feature to the event, in the sense of a public gesture of international co-citizenship and supportive participation.

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²² Agora was the space that gathered all the elements that gave life to the ancient Greek polis (from the Parliament to the Conservatory, from the religious temples to the market), and which is ideally transposed into the “square” as a central element of the traditional forms of city.

²³ Laboratory of Interactive Arts - In.Arts (Avarts - Ionian University), AGSA (2020 Adelaide Biennial of Australian Art: Monster Theaters), Venice International Performance Art Week, [mind the] G.A.P. - Gathering Around Performance, and Trojan DAO.

MONICA C. LOCASCIO (ed.) - FLORENTINA HOLZINGER
ZOSIA HOŁUBOWSKA - DANIELA BRILL ESTRADA
PÊDRA COSTA - ELISABETH VON SAMSONOW

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TABOO – TRANSGRESSION – TRANSCENDENCE IN ART & SCIENCE 2020

All You Have to Lose is Ecstasy: The Intuitive, Occult, and Somatic as Methods of Inquiry

ABSTRACT

This guided discussion, hosted by Monica C. LoCascio, took place over three hours around midday on a foggy October 25, 2020, on The Goddesses' Land, near Hollabrunn, Niederösterreich. The participating artists have artistic and research practices that acknowledge the body as a primary space for transcendence in the merging of science and art, and the occult, intuitive, and/or somatic practices for creative stimulation, transformation, healing, and knowledge creation. The intention of the gathering was to discuss how these practices can be used not only as methods of inquiry but also as forces of resistance. The artists present were Elisabeth von Samsanow, Florentina Holzinger, Zosia Hołubowska, and Daniela Brill Estrada. Pêdra Costa joined via Zoom from Berlin. Rosie Benn-Squire, artist and video editor, was also present and participated via Zoom from Vienna. Maria Bacila operated the cameras and assisted with audio recording. The soundtrack, „Spell: Path“ (audio essay) was composed by Zosia Hołubowska. Excerpts from the discussion included in this overview have been edited for clarity. The final video of the panel was edited down to just under one hour and can be seen by clicking on the QR code.

Acknowledgements

Thank you to the participating artists for traveling and trusting in the process, Elisabeth von Samsanow for hosting us and for the tea, The Goddesses' Land for welcoming us, Eliza Swann for the inspiration, and Florentina Holzinger for driving.

KEYWORDS Autotheory, Performance Art, Somatic Practice, Resistance, Intuition, Queer.

ROUNDTABLE

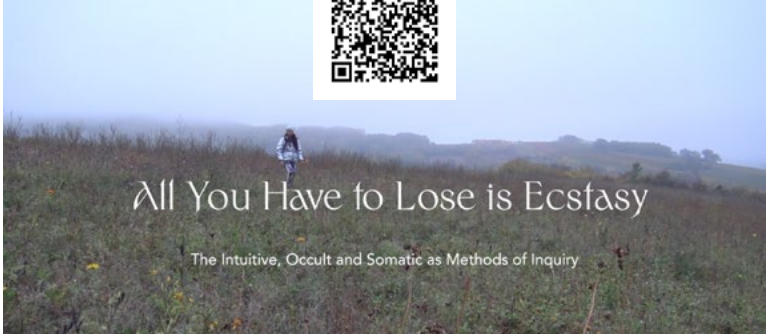
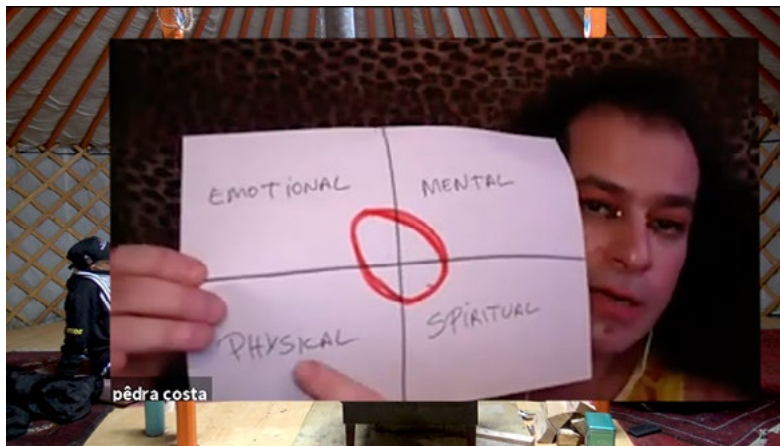


Image1. All you have to loose is ecstasy (2020).
Video captures and QR code. Courtesy of the author(s).



Images 2,3,4. All you have to loose is ecstasy (2020).
Video captures. Courtesy of the author(s).

AN OVERVIEW

While working on my MA in Art&Science at the Universität für Angewandte Kunst Wien, I kept coming to the question of whether or not to include my ritual practices in the explanatory chapter of the artistic component of my thesis. Although my work is grounded in academic sources and mainstream somatic therapies, many of the reasons I had researched the topics in the first place, and then incorporated them into my artwork, were connected to what some might call occult or spiritual. When I had broached these topics in institutional settings, they had been, by and large, discouraged and dismissed as ‘woo woo’, and my knowledge disregarded. I knew that if I included ‘magic’ in my thesis it would be considered less than, so I didn’t.

As a protective coping mechanism, I have learned to reformulate and search for documentation for these hidden practices in somatic and meditative exercises that can be grounded comfortably for most audiences in well-documented and contemporarily relevant research. In so doing, I found a new, institutionalized vocabulary for “mystical” phenomena, and my research was enhanced and transformed. But that expansion was predicated on my embodied intuition.

Pêdra Costa “The colonial project acts inside Europe as well. And I think your people... I mean, people with ancestral ties in Europe were affected a lot. So in a way they... don’t remember their knowledge. How can they connect to it? Inside academia, in the universities, how can you connect to the four parts of ourselves — the emotional, mental, physical, spiritual? We are talking about everything. We are researching, we are feeling, and have intuitions about what we have to look for... This is how we are connecting everything, and we cannot accept less than this in our classes, from our professors, and from the students. This should be the base of our knowledge.”

Recently, I have come to understand that many of the autobiographical and body-based methods used in artistic research can be described within the lineage of autotheory, a “genre of writing that emerges from women’s liberation and civil rights movements [which] ‘combines autobiography with theoretical reflection...’” (Fournier, 2021) as an important way of institutionalizing the use of embodied, subjective, and indigenous experience for knowledge creation and theoretical discourse. What I find particularly compelling about autotheory is how it addresses the critical question of *who* is accepted as an expert, why, and how this connects to the oppression of marginalized voices.

“Part of the politics of this autotheoretical turn in culture may well be that BIPOC, women, femme, trans, and gender-nonconforming folks align their work with theory to underline its critical potency and import. To consider the drive behind artists and writers choosing to frame their personal-critical work as theory, one must consider the

history of this work ‘theory,’ the politics of the term, and who has had access to the title of ‘theorist’.” (Fournier, 2021: 47)

Personal power and independent thinking have threatened the powers that be for millennia. Capitalistic benefits of the patriarchal oppression of the empowered woman/mystic have been perpetuated by religious superstition, academic stonewalling, patriarchal strong-arming, and scientific dismissal (Federici, 2004). But I was surrounded by artists using similar, and potentially mystically-, animistically-oriented methods to engage with imperative philosophical and political topics in an empowered and critical way. It was important to acknowledge these largely excluded occult and body-knowing practices not only as valid artistic research but also to share that dialogue publicly, in an effort to resist and subvert hegemonic skepticism.

I invited Pêdra Costa, Daniela Brill Estrada, Zosia Hołubowska (Mala Herba), Florentina Holzinger, and Elisabeth von Samsanow to participate. My intention was to host the discussion in a non-traditional format—one that didn’t uphold the outdated hierarchy of staged expert speakers and a quiet audience but rather engaged in guided discussion, in the round, that was personal, private, and safe while still accessible to a wider audience. I wanted to be able to start the discussion with a somatic group exercise to ground ourselves in our bodies and in the space together before we began. I wanted us to feel fully present before attempting to analyze together a topic so personal that it is simultaneously empowering and vulnerable.

Florentina Holzinger *“I did my education as a choreographer, so a lot of lying on the floor, and sensing and feeling myself. And I love that, but it also bored the hell out of me, and it brought me to question whether that was the only way to arrive at an action... That’s what I investigate — What is physical practice? What does it mean? What are the everyday things that we practice? And to this word ‘ritual’ that you mentioned... I prefer to call it a physical practice or practice—it doesn’t need to be physical—rather than a ritual. But what is really important for me is that it is a thing that I do every day. And it’s very repetitive and probably very boring but it’s something that gives me a sense of home, feeling at home with something that is not a home, and material home. I think in a practice or in a ritual, you can establish yourself at home in your own bodies.”*

We were invited by Elisabeth von Samsanow to gather on The Land of the Goddesses, the communal land of The Dissident Goddesses’ Network, for our discussion. She told us how the land was purchased by the group in a rare coup — usually, farmers would sell the land amongst themselves, but because one parcel of the land is in the northern part of the valley, and the other the southern part, they were hard to access for the farm equipment. This also contributed to the land being less developed, and therefore more wild and beautiful, with many

animals and plants finding refuge there. As a group, they decided that it should be a collective property offered as a collective space, not only for humans but for all types of collectives imaginable.

As a fitting opening for our discussion, von Samsanow described how the land is situated within an area named after the pre-Christian goddess Hola, and some of the ways the group is using Dowsing, or divining rods, to locate and liberate the natural watershed and re-hydrate the local climate and agriculture.

Elisabeth von Samsanow *“We go with rods and I engage my body as a sort of antenna for the sensitive energy fields that the Earth organizes her underground water currents, we declare the land of the goddess and it is a super anarchic proposition... to recreate the sort of matriarchy that just supposes a totally different rule. It’s the rule of the body because it is the rule of the connection between the bodies and the production of the bodies, which is, of course, a motherly thing.”*

How might dance and performance art explore private practice in a public way, with the potential to be instigations of and conduits for transformative rituals, not only for the performers but also for their audience? Can publicly-designated performances still enhance performers’ capacity for knowledge creation?

Why and how is it considered taboo to trust one’s gut or intuition above the logic of the current systems despite this zeitgeist being based on incomplete and imperfect models of reality?

Daniela Brill Estrada *“Science is a space where everything is possible because everything is missing. Knowledge is being created right now, and it needs input from different points of view and ways of viewing the world in order to exist.”*

How can the body could be celebrated not as something that needs to be monitored, augmented, and optimized with new technologies (as is more and more the case), but rather acknowledged as itself a powerful sensing technology that has been in R&D for millions of years, and one that can be trusted to generate and identify embodied knowledge?

Daniela Brill Estrada *“I have been elaborating this idea of the creation of new knowledge, and how it is created. It is necessary that it is network-based, and that it is queer. And the beautiful thing about complexity sciences is that it tells us that we are all complex systems. So my body and my disease are parts of a complex system.”*

It is an act of resistance to hegemonic power structures to give primacy to one’s intuition and grant oneself the privilege of one’s own embodied authority—

especially when one's body does not fall within the standards of the ruling or colonial powers, and when one's methods are considered suspicious.

Zosia Holubowska “I mean, for me, magic is a tool for regaining agency if we're trying to have political impact, because I grew so disillusioned with, let's say, more rational or more common ways of political engagement.”

What might we learn if the practices discussed weren't dismissed within academic and scientific circles? Especially as we find ourselves faced with unprecedented health, social, and environmental crises brought on by entrenched oppressive systems, it is imperative that methods are expanded. Oppressed, occult, and othered forms of knowledge creation should be recognized (if not amplified) to honor the fundamental human right of bodily autonomy, foster greater social responsibility and equality, and encourage ways of thinking that de-center and and dismantle theories that uphold systemic inequalities.

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KAROLINA ŻYNIOWICZ (ed.) - MARTA DE MENEZES
ANNICK BUREAUD - REGINE RAPP - CHRISTIAN DE LUTZ
BYRON RICH - PAULA BURLEIGH - CHRISTL BAUR
FRANCESCO KIAIS - JILL MCDERMID-HOKANSON

Staying in Touch: Sci-Fi Experiments for Post-Coronavirus Art Curating

ABSTRACT

In April 2020, an experiment in ergodic participatory writing began as a short term art research residency by the workgroup “Art Shows and Public Health” for the online event Braiding Friction under the EU project Biofriction. The objective of this workgroup was the development of different scenarios for ensuring the access to art spaces during pandemic times, as an essential need for the cultural identity of a society and its individuals. The research was based on historical data of previous pandemics, on technology and protocols of biocontainment used in high security labs, space, environmental and underwater research as well as in science fiction storytelling. The aim of the workgroup was to propose a variety of provisions to effect the required level of biosafety and security, further than physical distancing and methods of decontamination. Among the various forms of documentation and outcomes resulting from this three-month experiment, supported by the Portuguese institution Cultivamos Cultura led by Marta de Menezes, were: the pseudo-documentary “Staying in Touch: post-coronavirus art curating” edited by Pavel Tavares, and the short story of the same title co-created by Isabel Burr Raty, Dalila Honorato, Louise Mackenzie, Robertina Šebjanič and Karolina Żyniewicz. This roundtable intends to be a further development of the research while maintaining the role playing game: the curators of “Staying in touch” invite real life art curators that have been developing their activities during the coronavirus crisis to reflect on the role of the more-than-human, public and press in their practices today and in an uncertain future.

KEYWORDS Storytelling, sci-fi, pandemic, curating, art, collaboration.

ROUNDTABLE

KAROLINA:

This panel is going to be dedicated to the topic of art production and art curating in the time of the pandemic and also possibly to the discussion about post-pandemic time. Our lives have changed drastically since March 2020 and everybody experienced a lot of new things. The departure point for our presentations and discussion is a video which has been produced in frame of residential program *Braiding Friction*. Dalila Honorato and Marta de Menezes invited myself together with Louise Mackenzie, Isabel Bur Raty, Robertina Sobjanic to participate in a virtual project titled *Post-Corona Virus Art Curating*. Our goal was to write sci-fi ethnography trying to imagine how the production of art and art curating will look like if the Corona virus and possibly different new viruses will still have a strong influence on our activities. First of all we wrote a story, each of us using our personal perspectives, than we produced a video based on the written story. We decided as a team to invite curators which organized events during the first wave of the pandemic to share their experiences and to confront them with our sci-fi story. We have with us: Marta de Menezes (Portugal), Annick Bureaud (France), Christl Baur (Austria), Byron Rich and Paula Bourleigh (US), Christian de Lutz and Regine Rapp (Germany), Francesco Kiais (Greece), Jill McDermid-Hokanson (US). The movie is just an excuse for a broader discussion.

MARTA DE MENEZES:

I want to give a more private view on that it has been like continuing working as the person in charge of *Cultivamos Cultura* and the curator of many art programs. In March 2020 I was setting up the FACTT exhibition in Toronto which I organized in collaboration with partners from around the world. I had to leave my tour. Just after the opening we turned back to Portugal to go straight into confinement in my home. Curating in different places around the world is something what I am strongly interested in. I shared it for instance with Roberta Buiani and we discussed how to bring art to different audiences leaving the traditional gallery space. At the same time I remember talking to Annick Bureaud about *FEMeeting* which was going to happen in Paris and Troy (New York). We were talking together with Kathy High, Branda Miller and Dalila Honorato how heartbreaking is making the decision about canceling the both meetings which were supposed to happen on the 21th of March. It was really heartbreaking, we were crying but at the same time we didn't want to let it go, because this is very important project for all of us. This was also the moment when *FEMeeting* got a huge boost through the help of Annick, Dalila, Kathy and Branda and every woman contributed to what we decided then would be *FEMeeting* web presence. The whole community came together, while being apart, to imagine how it would be to have art on-line. With time *FEMeeting* Web became *FEMeeting Praxis*, for instance, Isabel Bur Raty started to give meditation and grounding sessions once a week. We did an on-line exhibition with 40 or over 40 short videos which came from all over the world about experiences through the pandemic, through the confinement. This is available on our website. The other thing that we also did is *FEMeeting*

Tea Pot Chat happening on Zoom weekly. We are still doing it now. There is no predominant subject to discuss. You just jump in with a cup of coffee, tea or something harder and you simply join the conversation. This is the matter of bringing us together, talking about work but also about more personal things, like: how we are dealing with being separated, being apart, with not being able to share our experiences, our daily lives with our peers and friends.

The next thing is that *Cultivamos Cultura* is in a project called *Biofriction*. This is a project founded by EU and our partners are: Hangar, Bioartsociety and Kapelica Gallery. *Biofriction* was very much based in its core on mobilizing artists and artworks and bringing people together. In the pandemic we had to somehow re-locate and re-direct this European funding and that is how *Braiding Friction* came into action. In the middle of March we were having a lot of discussions and meetings on-line to try to understand what would the project which is based on bringing people together become when traveling is limited, when you can't go outside of our home, how do we facilitate as a group, facilitate working together across boundaries. That would actually not happen if it wasn't for the pandemic. *Braiding Friction* was exactly this. Together with the other partners we selected four group leaders, Dalila Honorato was the one selected by Cultivamos Cultura, Laura Benitez Valero was from Hangar, Marietta Radomska from Bioartsociety and Spela Petric from Kapelica Gallery, to bring together working groups of people to discuss, to produce a knowledge and to push forward the knowledge about issues which were relevant at that time like: How do you make art during the pandemic? How do you create new knowledge at the distance? How do you systematically produce the knowledge making it available to others? What can you do around that? They did absolutely amazing works, including of course the *Staying in Touch* video which Louise, Robertina, Dalila, Karolina and Isabel produced with the help of Pavel Tavares, editing the video. I strongly encourage you to steal the video which is absolutely amazing in my opinion and it was such a pleasure to meet these women and being rather more like witness of how they could to construct the knowledge, how could they think about issues which were concerning us all, and how could they then output into an amazing artwork that is the video itself. All of this was happening probably around late May when the video was being done and everybody was getting crazy getting everything finished and under pressure. At the same time CC was receiving residents, we are still receiving them. Although, with Covid we had to make some changes of the number of residents which we can have in every given time and ideally they would have to maintain the entry and exit, so that was not as much of coexistence in the space and exchange of experiences as we usually have. We will continuing in having residents through up the year.

In July I think it was the first time when Christl Baur contacted me about doing something for *Ars Electronica*. She was contacting me and Dalila about doing something with *FEMeeting* and then with *Cultivamos Cultura* as well, and we of course did *Ars Electronica*, preparing a hybrid exhibition. It was a physical show on our site but it was also a virtual exhibition on the hub which you can visit. It was really challenging when we started thinking: What is the hybrid exhibition?

What does it mean to have a work of art in this kind of constraints onto virtual space and we haven't actually stopped what does it mean. We created amazing 3D renderings of works which were physically in our space at CC. Unfortunately, the hub is not really prepared to hold very big files so we had to transform them into videos for them to be available on-line. Adam Zaretsky, Luis Graca and myself, we did guided tours on the physical exhibition that you can also see during while you are going through the space in the virtual world. However, the questions are still the same: How we connect this both series of experiences? What makes an artwork? What is important to have an artwork in virtual space?

In July I also went to meet Annick and it was the first time of traveling by plain after the confinement. I went with Pavel to Treviso to meet with the group for *Traveling Plant*. It was a won to my spirit to be in the presence of those people when working. It has been an effort to overcome difficulties and to not lose spirit, not lose a sigh of what is important and what is relevant.

For the end I would like to say a few words about our new space in Lisbon. It is going to be an exhibition space, laboratory, residency space, office and an area where you can lounge, read, talk to other people about what is your interests. The plan for the nearest future is *FACTT 20/21*, *ArchIve Project*, *Hybrid Lab Network*, *FEMeeting*. We will keep having residences, producing more artworks, hosting more people and ensuring you are all connected to grow together.

ANNICK BUREAUD:

When I watched the *Staying in Touch* video I recognized in it the same feeling of vertigo, of dizziness which I had at the beginning of the pandemic, more specifically at the beginning of the first lockdown. There was this question: How do we reinvent ourselves? Of course, reinventing ourselves is at the core of our jobs. For instance, in the TTT artbox you may see one of the projects which I did in 2019 with Robertina Šebjanič exploring different ways to document artworks. It is a hypertexted video to document her installation *Neotenus Dark Dwellers -Lygophilia* and to provide online an experience of a physical artwork as genuine as possible. The question in this pandemic also was: how do we keep the channel open? How do we avoid shrinking our world, shrinking to only on-line things. I think, like everybody here, that we still need our bodies, we still need touchable things. The question is also how do we avoid being purely local at the risk of becoming parochial not to say nationalistic. I was listening to discourses, at the time really critical, questioning myself: how do we keep in touch, literally. That is how the *Traveling Plant* project came to being. *Traveling Plant* is a story and a curatorial proposal. The story is about a plant which wants to travel the world and it is going to travel around the world from hands to hands (at least metaphorically). We can't travel but we can give it to somebody else and it is going to report from where it goes. This is a distributed, collective curatorial approach. The *Traveling Plant* is the umbrella for the series of events presenting new artworks. They are going to take place over time and all over the world. This is a project which is going to be hosted by various people and organizations, each of them will organize an

event which can be small or big and which can take any kind of format, content, aesthetics. The new artworks which will be produced also can be of any kind, any aesthetics and in any medium. For me one of key things was willing to keep the connection. It can't be only me deciding to do alone this project. In my mind it is really a distributed, collective, curatorial approach. The first thing which I did was giving up my curatorial authority and inviting people, all women: Marta de Menezes, Claudia Schnugg, Tatiana Kourochkina, Robertina Šebjanič to join me to carry the project. What we are doing is carrying the project and other people will propose a curatorial content. The core of the project is supporting creation of new artworks. This is a collective curatorial project which is having individual proposals that will be locally done by the hosts. It can be whatever: on-line, on-side, that is their responsibility and us together we will create a collective common production which could be partly physical and partly on a website. For me the notion of trust is very important. I have to trust these 4 other persons and we have to trust all the hosts. Maybe somebody will come with something that I love, maybe somebody else with something which I don't like but this is fine and I think that this is important. The first thing which we did—and I am grateful to Ars Electronica to have accepted us in the festival this year—is the *Plant Preparatory Logbook*, asking people to write short texts about what the plant should expect to witness when reaching their place. We got over 60 fabulous texts, which you can read on the website. There are people whom I don't know and it is exactly what I was looking for. At the moment we have the website, some videos and the Logbook and we work together on the organization and legal context to bring *Traveling Plant* to the next step.

BYRON RICH & PAULA BURLEIGH

Byron Rich:

Paula and I curated an exhibition titled *Bioscientific Imaginary* at the university where we teach, Allegheny College in Meadville Pennsylvania. I will give you a short history about how the project developed and Paula will say more about what does it mean to do curating in the time of Covid-19. The exhibition got the title from one of Marietta Radomska's wonderful 2017 papers *Non/living Matter, Bioscientific Imaginaries and Feminist Technologies of Bioart*. This was an amazing paper which I encourage everybody to read. I read it a couple of years ago and I was also lucky enough to work with a really wonderful artist Mary Magic, that taught me a lot and it sent me to a path interrogating my own biases and perspectives. When we started to conceptualize our project it really became clear that representation at our campus is something I was struggling with a lot and many of our students didn't see themselves in a particular area of discourse, within science, within art. We developed a really amazing transdisciplinary program at our college, gaining unique interest in that. We tried to promote scientific critique, scientific literacy and, as Paula used to say, passion and amateurism. We were trying to promote an interdisciplinary collaboration and to give to people an opportunity

to see themselves within very esoteric spaces and see themselves like in the future. Part of doing that was creating an exhibition which coincidences with our program. I was really lucky to work with Paula which allowed me to kind of shoot at the stars and to invite three people which I deeply admire: Marta de Menezes, Kathy High and Jennifer Willet to exhibit at the Allegheny. This exhibition opened the eyes of our students and learning community in a really profound way to the potential of feminist artists using bioart as a mechanism for our cultural exchange.

Paula Burleigh:

In terms of challenges which we encountered curating during the pandemic, we did begin the conversation around this exhibition prior to the existence of Covid-19 and then we already kind of conform the artists for coming and then when the lock down happened, for a while, there were a lot of question marks as we worked what the gallery would be or weather the college will be open in the fall. At the same time, we were delighted to be able to receive the support from the university to move forward. However, we were not permitted to have any physical visitors from the out of campus community into the gallery because we were trying to create a tested bubble. It became really essential to create a valuable and meaningful virtual experience of the show. Normally, at the stage of exhibition we have artists come, after they bring work with them. This time, clearly, travel was prohibited so we had to deal with international shipping. Byron had to know how to culture cells, and he worked with fantastic faculty members in the bio-department culturing cells which came from Marta in Portugal. Our location is kind of difficult for visitors to come to if they are from outside the campus community. Additionally, Allegheny is about 90 min from the nearest major airports in more urban areas like Pittsburgh Pennsylvania or Cleveland Ohio. What came out of this was that the whole show as curated was emblematic of the pandemic and we really needed to create a more expansive digital footprint in order to give this exhibition and extended life on-line. Once the show was opened we traditionally have really engaged audience from our faculty, colleagues and our students but it was crucial for us, especially in the development of the new program, to engage with a wider campus community so we were pretty aggressive in our outreach to other faculties to bring us classes, so we had philosophy classes, environmental classes come, and we developed the student tour program where student gallery systems will take their follow students around to engage with the works on view. Something that I noticed was that many of our students, which have never before been introduced to the idea of bioart, to the kind of more expensive idea of art beyond being simply an object or something more discursive, were having really intense conversations with us in the gallery because to curate a bioart show in the moment of the pandemic you really ask students who are just nearly becoming aware about the vulnerability of their bodies to think about the body in this deeper critical way. Previously maybe they thought that it is something anonymous but they were thinking about it as a vector of contagion and all of other forms of being complicated in the pandemic era.



Image 1. Jennifer Willet, top row, left to right: Baroque Biology Paper Theatre (Soliloquy of the Dandelion), Baroque Biology Paper Theatre (Erythromycin Enchantment), Baroque Biology Paper Theatre (Enthusiastic Perch), Baroque Biology Paper Theatre (Sullying Guests), Baroque Biology Paper Theatre (Interspecies Interludes); bottom row, left to right: Baroque Biology Paper Theatre (Subcutaneous Sightings), Baroque Biology Paper Theatre (Estranged E.coli Carrier Organism), Baroque Biology Paper Theatre (Clandestine Cavernous Communion), Baroque Biology Paper Theatre (Symposium in the Solarium), Baroque Biology Paper Theatre (Unorganized Extra Cellular Material at Midnight), Baroque Biology Paper Theatre (Inoculated Balcony Scene), 2019, photographs printed on Lustre Archive paper. Series photography by Justin Elliott. Installation view, Bioscientific Imaginaries, on view in the Allegheny College Art Galleries, Meadville, PA; 2020.

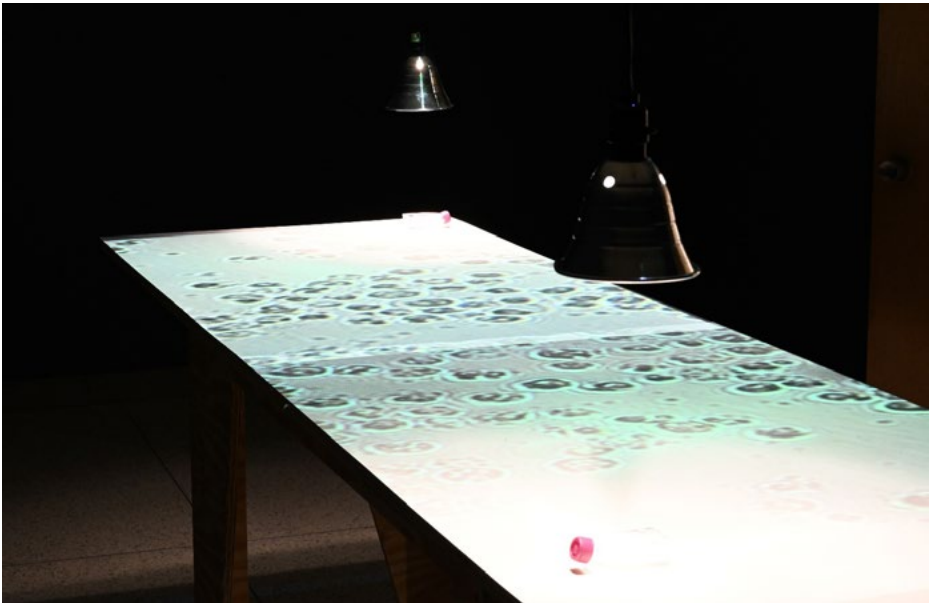


Image 2. Marta de Menezes, *Immortality for Two*, 2014, Collaboration with Luís Graca. Installation with video projection, lights, table, two white blood cell samples. Installation view, Bioscientific Imaginaries, on view in the Allegheny College Art Galleries, Meadville, PA; 2020.

Dear David Bowie,

I have a bargain for you... I am writing you with a strange request... I am a life-long fan...

I have been following your career since I was little. I was born in 1954, so not that much younger than you... but enough so that I feel like a younger sister.

I offer these photos to you – re-enacting famous images of your career. I know thousands of fans have done the same – Tilda, probably the best, but I humbly offer mine among the others.

I was hoping these photos might capture your attention for a moment.

I want to exchange these for a throw-away item. Your poo.

I want to conduct a fecal transplantation with your stool – implanting your poop/gut biome into my colon.

This goes against all the “rules” – it should be someone close to me, someone under 60, pre-tested, etc., but I know we will be compatible.

And basically if I could become you...well, say no more...

I know people, who know people, who know people, who can probably get this letter into your hands.

I hope you will look upon this strange request favorably. I have Crohn's disease and you could change my life forever – although you already have!

I eagerly await your response.

Your fan,



Kathy

Image 3. Kathy High, *Kathy As Bowie*, 2015, Photographs by Eleanor Goldsmith; Makeup by Jeanna DiPaolo. *Bioscientific Imaginaries*, on view in the Allegheny College Art Galleries, Meadville, PA; 2020.

Christian de Lutz:

When we were looking at this film we were thinking about something else that comes to our minds for the last months, I mean the sci-fi novel *The Three Body Problem* by Liu Cixin . In the novel, there is a planet which has three stars and the stars come close or far away, and weather burns or freezes the planet during what are called chaotic eras. During these chaotic eras the planet's inhabitants are dehydrated and rolled up. During the stable eras they are rehydrated and life goes back to normal. This is something what we were thinking about exactly because the lock down rolled the cultural life up. At the local level, here in Berlin, it became dehydrated during the confinement and rehydrated in summer when the lock down ended. During this time, in April and May (and now actually again) we had to come to certain solutions, and we decided to get connected to other people. What was really interesting was that while we were disconnected with a lot of our local colleagues, on the international level we were much more connected by the projects and events like FEMeeting or Clair Netletton's *Viral-Culture* zoom meetings in Spring. We also had our own meetings together with Georg Tremmel and Bio Club Tokyo to connect some of the artists and scientists we work with here in Berlin, especially with the DIY Hack the Panke group, with people in Japan, also some other people like Pei Ying Lin from Taiwan who was living in Netherlands and to have series of exchanges. We also had series of online workshops with artist Kat Austen and biologist Nana Maclean. They worked together doing a series of workshops on microplastic and in the online event they talked about Microplastics and Coexistence. We also had a talk with Amy Young, Ken Rinaldo, Anna Paltseva, and Daniel Lammel and we had an online workshop with Fara Peluso. The latter was a part of *Mind the Fungi* project where she worked with people talking about her process of making a fungal textile or fungal-algal textile project. This can be viewed on our ALB website. We entered the summer and we had our exhibition *The Camille Diaries. New Artistic Positions on M/otherhood, Life and Care* which was originally planned to open in April and was postponed to August.

Regine Rapp:

Ironically, but maybe actually for a good reason, the content of this group show, eleven artists and nine artworks, was tightly connected to the aesthetics of care. In the pandemic we were intensely challenged logistically, structurally, curatorially by care. We could not have all artists coming to Berlin. That was the first obstacle so it was a constant negotiation which we were challenged with. For instance, Nicole Clouston could not come from Ontario to Berlin – so we actually produced her artwork in Berlin. We went to several lakes, rivers and ponds in Berlin and Brandenburg and collected mud. This was placed into Nicole's prisms, so called Winogradski columns, over the course of the six weeks of exhibition time, producing microbial life, which constantly changed colors. Another challenge was the work by Tarah Rhoda from New York, she could also not come to Berlin but she was really open, it was a truly intense collaboration.



Image 4. Installation view at Art Laboratory Berlin, 2020. Photo: Tim Deussen; courtesy of the authors.



Image 5. Installation view at Art Laboratory Berlin, 2020. Photo: Tim Deussen; courtesy of the authors.



Image 6. Art Laboratory Berlin, 2020. Courtesy of the authors.



Image 7. Installation view at Art Laboratory Berlin, 2020. Photo: Tim Deussen. Courtesy of the authors.

It was also a negotiation and a form of trust. She shared her protocols and in our team we produced her amazing installation with dialogue between animal and plant, between hemoglobin and chlorophyll. What we all have perceived during the exhibitions: we had small groups (of visitors) and concentrated conversations which we actually loved. We could not have more than 6 people in the rooms so it was really intense. During the opening we all took very strict hygienic measures. Coming from being an art and research platform dealing with biology and art it was, I can't say a pleasure, but a really interesting way of working with the scientific protocols and art mediation. We had intimate, embodied experiences with the artworks and it was very much the double effort of the phenomenon of care.

Then we had a conference which we pushed into virtual realm. It had really positive outcome. We used a live, online conference format, it lasted the whole day and went through many time zones. We started in Australia and then we went all the way to Canada. Thanks to that we could have live speakers from around the world. We had as keynote speaker Astrida Neimanis from Australia, Stefan Helmreich from MIT and then also Barcelona based Laura Benítez Valero coming from biophilosophy. So that is how we experienced the virtual intense presence, international speakers and audience. But of course we missed the coffee break encounters. What was important for us was that we met live there and we had a lot of time for discussions. Now, what is probably a phenomenon which we all know but we are still very pleased to see is the fact that the recording is available online and only a few weeks after the conference we had more than 1300 visitors and an amazing feedback.

Talking about work in progress, there is the *Mind the Fungi* exhibition, which is actually closed at this moment. It shows works by Theresa Schubert and Fara Peluso. There is also a book coming out, dedicated to the *Mind the Fungi* project.

CHRISTL BAUR:

My perspective thinking about curating and approaching such an event like the Ars Electronica Festival festival has changed this Summer quite drastically. Many partners which that we've approached this year, including Marta and Annick, trusted us and jumped with us into the cold water. This is actually the best thing that could have happened to us. When we went into quarantine and home office mode in the beginning of March 2020 that was the kick-off of thinking about the festival, its topic and outline took place immediately afterwards. We already were in this wonderful position of moving to a new festival venue this year and suddenly, during the first week of lock down, everyone was we were sitting all at home, thinking about what to do now. It was at the very first at this moment that all of us said that we've all agreed to find a way of doing that and we will come up with something new what we love. There was not even a minute of saying-thinking: let's forget about it this year. This kind of spirit was the essence reason why we were able to move through all of that until the actual event in September. On the other hand, we had been privileged and we were in a fantastic situation of having a wonderful team having all the knowledge of having and all these those great partners of doing somewhere an event like that, that allowed us to be creative.

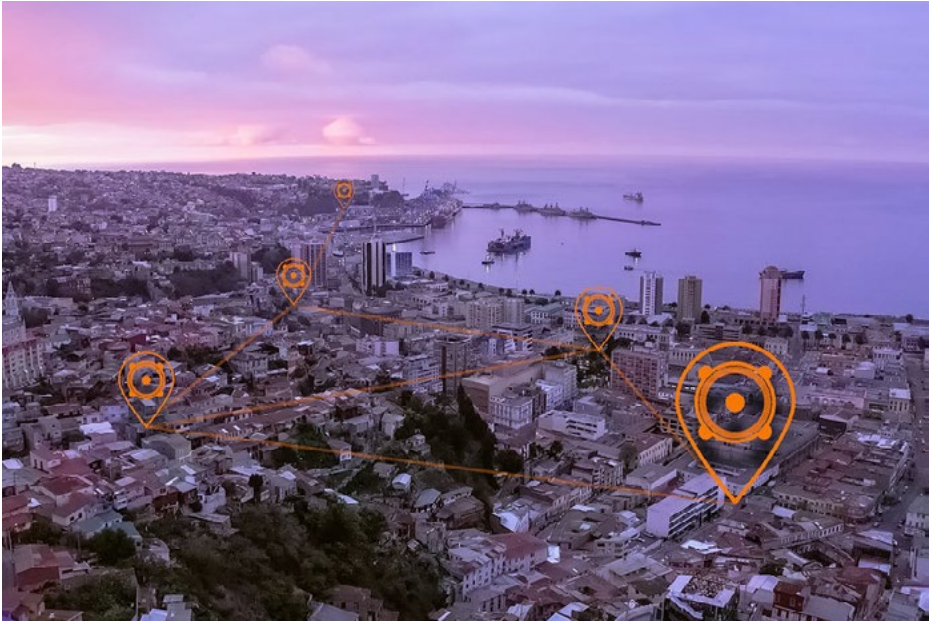


Image 8. Ars Electronica: Kepler's Gardens: Chile, Photo: Marcello Raffo; courtesy of the author.



Image 9. Ars Electronica: Kepler's Gardens, *MegaPixels* / Adam Harvey (US), Jules LaPlace (US), Photo: Tom Mesic; courtesy of the author.

At the central point of this year Ars Electronica Festival was the wish of not disappearing into the network, of not doing something just digital but of very much trying to try to create a hybrid event. The consequence of all of this was that we created coined the first decentralized Ars Electronica Festival ever so far. In the 40 years before the pandemic, everyone moved to Linz for those five days. Suddenly Linz was, at least for these five festival days no longer the center of the media arts world anymore but the eyes attention were on whole range of turned to the festival gardens taking place at different cities placed around the world. This kind of new approach allowed to the festival to expand in a completely unprecedented way, creating a completely new proving ground for us as a team and for our collaborators.

At the very beginning was the question was: What do can we do and how? How do we imagine this festival? We didn't know, there was no previous experience available. We've just tried together to develop of what this kind of festival could turn into together-be. It was an experiment from the very beginning and despite many difficulties and misguidance in the end, I believe it was successful on many levels.

We were traveling from big cities like Tokyo, Barcelona or Sydney to whole different regions like Silicon Valley, Antarctica or Oslo's Fjords, and to places were many of you probably never went before. The partners range came from the cultural institutions, universities, cultural capitals and were individual artists that decided to follow us along to at least make something creating visibility that is relevant to them for their topics. Thereby, this festival turned into a journey with many stops around the world and kind of reflecting very in an individually and local perspective in every place what the pandemic means and, what kind of change we as humans can created due to that now. For us it was a journey into *Kepler's Gardens*, proving again that the opportunities and possibilities that come out of this emerge from collaborations between art and science in the broadest way, and which are essential for the survival of our own and other species as well. We were able to visit communities, which are quite actively working on solutions to enhance our way of living especially in relations with our planet and other entities. As some kind of positive approach to different aspects and creating a new life together. This was something which coin approach was essential for the festival topic. However, it took us pretty long time to decide: Should we do suggest a festival topic like every year before the previous years? Should we have an one central team or rather how can the theme represent and give a voice to all those partners being able to discuss and their individual topics present on the Ars Electronica platform. In the end, finally, it was essential important to us that every community could talk about their topics and, we just decided about 50 five keywords points, that highlighted, at least for us, very pressing topics of our time of our current time. Topics that disappeared under the veil of the pandemic such as the democratic movement in There was a discussion about democracy in Hong Kong or in Chile as well as of course ecological issues which lead to the climate crisis we are now facing.



Image 10. Ars Electronica: Kepler's Gardens, Impression of the Ars Electronica Center, Photo: Tom Mesic; courtesy of the author.



Image 11. Ars Electronica: Kepler's Gardens, Impression of the Ars Electronica Center, Photo: Tom Mesic; courtesy of the author.

This was also a try to turn into a platform to people for everyone who is no longer able to make which I not able to present their viewpoints visible. anymore, weather the protest which is not able to go outside due to the lock down or whether it is a scientist suddenly not heard anymore. We approached all of these our partners from our homes asking inviting them weather they want to be a part of that our experiment. Wand we have never expected such a excitement from so many people around the world. It put the festival on new level. There is no going back for us and. What we are currently working on is trying to understanding what the opportunities this has created for us of this new type of festival. One of our partners said very nicely send me a message on the first day of the festival, saying, sending me a message: That is how it looks like when the media art community works together. We are thinking about how we can create even more hybrid events that of course allows to us to use the technology which we have at hand, at this moment but also when and how can we give the platform access to our platform again to the people which who needed it most?. We don't stick on rather on-line or off-line but really want to combine online and offline try not for the sake of technology but for the sake of humanity, to build bridges that help us to connect even more create connections with each other.. I like this topic of staying in touch reflects our current being quite well as because I think I haven't being in touch with so many people at the same time as never before than in this Summer, and on the other hand of missing personal encounters. that was the coolest experience.

FRANCESCO KIAIS:

In May 2020, the Trojan Dao Foundation asked me to curate an artistic event in live streaming to raise awareness about the fundraising for the “Hellas COVID19 3D Printing Supplies” program. The program aimed to contribute to cover the cost of supply raw materials for 3D printing of protective masks for the medical and nursing staff of public hospitals. The event “GOLEM – to be generative in solidarity rather than be creative in solitude” was conceived in the context of the first lockdown, when the international community started to react to the pandemic and many questions of ethical nature arose. In that situation everyone found him/herself having to take a position, both personal and professional. Due to the forced social-distancing, we artists had to create a new, unusual environment: the purely digital event. Our stances in relationship to the new social conditions drove to mutual opportunities of sharing our experiences, generating different moments of reflection, and this panel has been one of those moments. The event “GOLEM” created a moment of reflection about the emergency itself; not only as an act of solidarity, but also hinting at the global dimension of the social, political and economic impact that this emergency created. Consequently, the project has been also a ground for reflection on the meaning of “how” and “why” making art in such peculiar time. The practice of Performance Art has been my choice as a visual artist in the last 20 years, precisely as a terrain of constant questioning why making art.

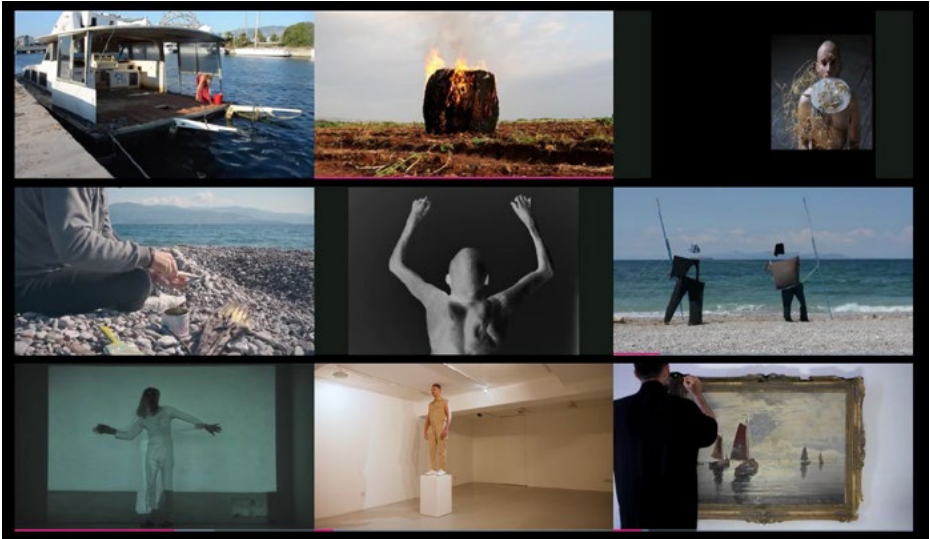


Image 12. GOLEM - to be generative in solidarity rather than be creative in solitude. Excerpt of the online event. From left above: ATHINA KANELLOPOULOU, ANDREAS PAPAMICHAIL, MARCEL SPARMANN, BILL PSARRAS, NICOLA FORNONI, LUCIA BRICCO, MARTA LODOLA & VALERIO AMBIVERI, PASHIAS, YIANNIS PAPPAS. Curator Francesco Kiais. Courtesy of the author.

To perform does not simply imply to be contemplated by someone who is looking at you. It rather means to create a context in which the creative process becomes a shared process, and in which “me-performing” is only a part of the work of art. Therefore, the work of art in Performance Art is not the artist’ performance in and of itself, but the meeting between the people involved in it. In Performance Art, the work of art is the gathering of many separate “solitudes” becoming “us”. The social distancing caused by the pandemic imposed a deep reflection on this statement, and the question became to create a moment, however ephemeral, of gathering and acting in the direction of a possible change.

Following the panel’s discussion, I have heard speaking of autophagy and cannibalism. In the failing process of globalization our societies as a whole seem to participate in a gigantic organism, in which they assumed both autophagic and cannibalistic attitude. The act of solidarity through an artistic event, in the context of the pandemic, aimed to contrast the autophagic and cannibalistic aspect of the “giant” we are part of. In this perspective if the myth of the Golem summarized in the event’s title, can be understood as a metaphor for the sick and virus-generating system in which we live, the subtitle became a statement against the giant sick tendency to become cyclically destructive or self-destructive.

One of the reasons for reflection caused by the pandemic was the “rebirth” of the plant and animal world in the face of the sudden stop of human activity. Playfully according to the metaphor offered by the Golem myth, it is as if for a moment we had stopped the “giant”: the whole of our societies and economies.

The system we created, stopped by the pandemic, has ceased to be destructive / self-destructive, leaving room for all forms of life other than ours on the planet. Just think about this: we humans are part of the animal world, which represents only 0.3% of the biomass present on the planet, which is composed of 85.5% of the plant world, and 1.2% of fungi. The destructive force of this 0.3% is immense and depends on an attitude to overpower that is almost absent in the plant world. If we observe the way of “thinking” and living together of the different forms of life of a forest, we understand that they interact in a collaborative and constructive way. We are talking about forms of life that, unlike animals, do not move, yet have been able to spread over the entire earth’s surface, guaranteeing the existence, where they persist, of an infinite variety of species.

JILL MCDERMID-HOKANSON:

Grace Exhibition Space is a small space in New York City. We were in Brooklyn, now we are in Manhattan and we do live performance art. We have a physical space that we can’t have an audience included in anymore. It has been a huge importance to us to be with the artists present in this space. This wish is jumping us currently forward into the technologies that other people have been familiar with for so many years now. We had an artist who is environmentalist, visual and performance artist which has been growing plants in the space and filling it with an amazing installation, giving one-on-one tours. We are lucky to have a plaza in front of us, so we started incorporating performances happening at the plaza with people wearing masks while watching.

Bringing everything on-line was a challenge for us. The person who does our visual documentation became our producer out of a basement in Bushwick. He found it difficult to try to run multiple screens, multiple connection with people from all around the world to deliver a live performance. He needed an assistant. We were local and now we are international! Our program had live performances from South Korea, Norway, Mid West of the US. We tried to have a technical rehearsal with each other on a Thursday and then to connect on Friday via Zoom. The event happened at 9pm in NY but it was broadcasting all over the world so it was challenging how to promote our event in different time zones.

Through being successful in that, we were approached by Guillermo Gomez-Peña, from La Pocha Nostra to help him to broadcast an idea that he had: artists performing simultaneously around the world from their spaces where they are confined during the pandemic and approaching how to present work in this time of paranoia (*How to Survive the Apocalypse | La Pocha Nostra/Grace Exhibition Space Live Event*, n.d.). We had, among others in this scene, artists from Brazil, Mexico City, Norway and the Mid West of the US. A part of the recording is without sound because the event started at 9pm in NY and it was shown also in Norway where was around 5 or 6am and the composer had to get his kids ready for school.

This was an experiment. We are learning as fast as we can how to approach presenting our works in this world as opposed to being in person with each other. I actually like the intimacy of how we film from small cameras and the audience can feel intimate even though we are so far apart.



Image 13. Guillermo Gómez-Peña, *La Pocha Nostra*. Image from the live event *How to Survive the Apocalypse* by La Pocha Nostra/Grace Exhibition Space in the official website of Grace Exhibition Space. Credits Guillermo Gómez-Peña, La Pocha Nostra and Grace Exhibition Space.

KAROLINA ŻYNIOWICZ:

The question which seems to be important now, during the second lock down, is: Do you think we should keep this solutions which we found during the pandemic for the future or it is better to get back to that we had before? We can't be sure that the Corona virus will live us or will change its character. Possibly, we need to be ready for different pandemics. What do you see as crucial for your professional activities at this moment?

CHRISTIAN DE LUTZ:

We found it interesting to observe how different communities around the world are dealing with the lock down and how they are successful in working together. We are sure that a lot of this tools which we are using now will be in use for years, for instance on-line learning and regular remote meetings. These multiple options are really enriching and we don't want to lose them. We were talking to our colleagues from Berlin art scene, which is very conservative, they were complaining that they are not able to do anything being stucked very locally. For us this year has really shown or has been given a lot community exchange across distances.

MARTA DE MENEZES:

Actually even before the pandemic I was posting the question: What is an artwork? One of problems of *Cultivamos Cultura* is that we have a collection but we are not a museum so we don't have it in exhibition. Some of the works which we have in storage, are biological artworks. We have been dealing with issues such as: How to store them? How to exhibit them elsewhere? How to bring them to furniture when they are not in exhibition? That actually helped us to rethink the idea of hybrid spaces. The digital space was always an adjective for us allowing us to put a lot of knowledge in there. That is usually not the best to have in a physical exhibition. I love going to exhibition spaces and having an interaction with the artworks which I not completely formed on knowing everything about it. This is something that ALB does really well, in my opinion, is that you have information available and it enriches your experience but the artwork by itself is not surrounded by information. It needs to breath and for that is also need the physical space. Meanwhile the digital space is a place where all information can be present in different forms, weather they are virtual reality, augmented reality, text, videos, interviews with artists or curators that have seen the piece somewhere else. I was talking to my colleagues the other day about the possibility of giving an artwork instruction. It could have different interactions in different places, that seems to be interesting. In this situation, artists are art piece writers. I think we can't go back at all, the idea is to understand how to rather move forward and how to really value the moments when we are together in physical presence and how to enhance the value of the moments when we are not in physical presence as well.

CHRISTL BAUR:

For me that would be no way of going back to what we had before march 2020. Even though, I shared how difficult it was for us I also had the most exciting year trying to understand what is required for us in order to get in contact to each other. We had a hard time bringing physically to other places before the pandemic it was quite difficult to get in touch with. It needs a lot of work and, it is not happening overnight but we had a chance of expanding our networks to people which we have been not reached out yet. On the other hand, I love the idea showed in the *Staying in touch* video of using another spaces than only traditional galleries. That can also give us a chance of new encounters with others, human and non-human.

BYRON RICH:

What was exciting to me, and I think to Paula as well, working in institutional studying in the US, was that we can reevaluate the values which we have ostensibly in the institution, such as: sustainability and representation. We lifted them in a way that the rest of the university is trying to catch up. They are trying to formulate how could they interact with the global audience during the lock down. We got a total line of pooling the rest of institution along, in terms of actually leaving out the mentioned values.

ANNICK BUREAUD:

This kind of emergency mode and trouble mode that we were in all over the world pushed us to invent or re-invent new ways but the thing is to make these new solutions sustainable. We need to think how to transform them into new models instead of just seeing them like a reaction for the emergency mode. That is the first point. The second point is how can we re-invent all this spaces for showing art, how can we, for instance, use public spaces, such as shop windows. I remember that *Ars Electronica* did once an exhibition in shop windows. The moment when stores were closed in Paris was hard but it made me thinking about possible use of this inactivated spaces. Could we convince a shop owner to give us a part of his shop window? How could we use all the public facades of buildings, they are often window facades where you can put stuff outside, visible from the outside. Recently, there was a performance done by a French performer which was happening on stage and on Instagram at the same time. That is also an example of solution. I am not convinced that we wanted to get back even if we would be able to do that. In order to move to something else we need to construct sustainable solutions. I don't know how much energy spent the *Ars Electronica* team this year but, as Christl said, that was a huge shot of energy but we can't work on adrenaline nonstop, it would kill us in a longer perspective.

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Complexity IS.

ABSTRACT

Genetic alteration happens. That's how we came from worms and now have nose hair and toe nails. A proposed art project suggests identifying local organic and/or environmentally available mutagens and adding them to cultures of local microbes. The cultures would then be released into the watershed. This project was rejected as having 'no educational benefit', but it did produce a raw response about human footprints compared to mutation in itself. This incendiary tract is a multi-pronged attack on the bioethics of anthropocentric assumptions and their influence on both, the creation of the Anthropocene and the solution to human sources of degraded climate. Ranting about how scientific decimation of habitat and biodiversity leads to the scientific sustainable glory of ecologically sound geoengineering, this proposal turned polemic is critical of utopian futures that promise reversal of toxic air and polluted water by reliance on good science. Science is not GOOD, science is amoral or it is bad science. Art relegated to goodness, ceases to be art. Complexity IS.

KEYWORDS Bioart, Complexity, Organic Mutagenesis, Water, Toxicology, Polemic, Rant, Anthropocene, Mutation, Random.

INTRODUCTION

Tactical media artist, ninja, detective, magician Aaron Gach wrote an email about including me in a potential art and science show about water issues. The following is our correspondence. I was interested in approaching water quality and environmental toxicology through the bad aesthetics of bioart. But like most bioartists, the project had to be a living example and push at the problems inherent in terraforming utopia. Proposing organic mutagenesis was about making toxic environments with organic products. The suggestion of producing mutated local water microbes ruffled some feathers. But by suggesting reintroduction, I caught the ire of the lead scientist involved. His response caused me no end of textual rancor and my participation in the show was not confirmed. And, the following text was written in an angsty polemical style, ranting about the role of the arts in science promotion and the treating of the public as a case of infantilism... but as with some incendiary texts, greater nuance exudes, interrogating the role of humans in the life world and the role of change in the everyday. Still quite critical of major polluters and GMO loving futurists, referencing cancer clusters and toxic waste, this style of teaching through agonistic bioethics continues to rile both the heartless and the heartfelt failed technicians of the untamable morass that is life in all it's complexity.

----- Forwarded message -----

From: [REDACTED]

Date: [REDACTED]

Subject: [REDACTED]

To: [REDACTED]

On [REDACTED] wrote:

Hey Adam,

Greetings from the other side. I'm cooking up some fine potions at the University of the Pacific in Stockton, CA and wanted to throw a taste in your direction. This summer I'm organizing a series of projects & events for a 9-day intensive summer institute supported by the University of the Pacific in Stockton, CA - about 100 miles east of SF in the delta/central valley region. The program is called "Aquatopia: the Confluence of Art & Science in the California Watershed" and is themed around water issues and community/artist/scientist collaborations. This seems like it could possibly accord with some of your work. Do you have anything on the burner that deals with water, water issues, water politics, etc? If you do, send it my way ASAP and I'll pitch it to the committee so we can bring yer ass out West. The dates are set for June 5-13. If you are interested I can send you more details. Please let me know when you have a chance.

Fun & Luck,
Aaron Gach

----- Forwarded message -----

From: [REDACTED]
Date: [REDACTED]
Subject: [REDACTED]
To: [REDACTED]

On [REDACTED] wrote:

Aaron,

I would like to collect fresh water microbes and protists and culture them for the public to see them live and video projected with a homemade video microscope.

I would like to make large mono-cultures or mixed cultures (20-50 2 gallon cultures) from local samples immersed in boiled and cooled local water and fed well. I would then like to work with a local scientist on identifying local organic and/or environmentally available mutagens (i.e. Parsnip juice, local superfund site soil or melted plastic from behind the recycling center.) These local, 'organic' or at least readily available environmental thing/stuffs could then be autoclaved or filtered and then added to the cultures of local microbes. This may induce mutation of these microbes.

The higher than usual rate of mutation water microbes will then be reintroduced into the environment without true knowledge of the effects. The humor is activist yet demonic, nothing new will have been done but the human hand becomes implicated in rate of mutation alteration.

Phobic reaction to change in general will write and take cover behind anti-GMO (which I support to some extent) but this is organic mutation and mutation from an environmental toxicology standpoint, locally imbedded in the environment already. So, the release is not really any different than the status quo (except perhaps in population size and speed of random genomic aberration).

Finally... The experimental life forms are wild animacules and they deserve a fighting chance. I will not bleach them out just because they represent difference. Let them ferment!!!

I'd just need some glassware, some grass cuttings, a pressure cooker and a video projector on loan... And some space to let the microbes live! I have a home-made video microscope!

AZ

----- Forwarded message -----

From: [REDACTED]
Date: [REDACTED]
Subject: [REDACTED]
To: [REDACTED]

On [REDACTED] wrote:

[To Aaron from the scientist involved, forwarded and anonymized:]

I read this proposal last night and I have to say (and I am saying this with a great deal of restraint) that I do not think much of this. There is no science here that makes sense to me. There is also no educational benefit that I can see because the “demonstration” will just confuse the public and reinforce already deeply held misconceptions about both how science is done and what science knowledge is. I really hope that if we mix science and art in your summer program that we mix GOOD science with GOOD art. This is particularly important for the College right now as we work to increase public awareness of our very fine science programs in order to raise money for much needed facilities. I hate to be so negative on this but this idea is really strange in my mind and dangerous.

----- Forwarded message -----

From: [REDACTED]
Date: [REDACTED]
Subject: [REDACTED]
To: [REDACTED]

On [REDACTED] wrote:

[AZ's response:]

OK, just to start, bioartists are not soft representatives for the public acceptance of biotech. We have more respect for the public than that. But, we are not angels. Life is not god. Life is not love. Life is not god. Life is not love. Science is not GOOD, science is amoral or it is bad science. Art, as a practice, may have a similar pretext, with the subtraction that aesthetics provides. Beauty is not only not GOOD, but by necessity beauty is less GOOD than objectivity as it seeks pleasant experience at any cost (kitsch.) The worst thing for both projects would be a romantic kitsch version of both art and biology. Neither of us just want to advertise for technoheaven, that is not a panacea either of our camps can promise.

There are two myths to dis-spell about my project:

-Everything Humans Touch is Not Sin.

If we alter and reintroduce we are vamping nature... Human assumptions of command and control may just be stupid humans dreaming like an infant of power. But, we cannot kill the vital force of the universe, bioenergy is perpetual motion, indefatigable and certain to reign beyond the presence of homo sapiens sapiens. Our projects of aesthetically engineering all new life for the fickle marketplace can only end up as a dream of suicide. Perhaps it is a human trait to hurt ourselves as the way towards proving our ultimate lack of omnipotence. But, contrary to much deep ecological popular opinion, mutation is not evil.

Mutation occurs regularly. There is always danger in change. But there is always change. Fear of change is not something to protect the public from. Not if you believe in evolution. And fear of change caused by 'nature' vrs. 'culture' could be read as a very religious distinction. It is as if there is a quiet and unsaid consensus among humanist, anthropocentric, naturalist, post-christian feelgood pop culture that "the end of the world" should come as an act of nature or by dint of demon antichrist crimes against humanity by the Other, not the clean machine of science or culture or everyday acts of being HMUman, a subsidiary of G20man.

Breeding plants and animals in the name of human will and desire is not a new project (look at human rituals of dating, competitive orchids, 4H and Genetically altered mice <https://nc3rs.org.uk/GAmice>. Living without enacting change is not an organism's option. Choosing directions for the channels of life are as simple as, what do you eat?> What is a pest worth killing?> What kills you and your kind?> Who is not of your kind that you find value in protecting?> And, eventually, how can we use technology to influence the results of life's effervescent crap-shoot in our favor.

But, quietly... How do we know the future, without belief in prophets, enough to not hurt ourselves with our incomplete wisdom and our awesome intelligence? Various risk assessments compete for air-time. One, corporate biotech, is in the risk minimization business. Another, anti-GMO grassroots is in the risk maximization business. This project sort of makes fun of the anthropocentric assumptions of both camps. Biotech is greedy, the project of biology is only as greedy as the research pool. Organic food is high tech... and a proven hearty tech that tastes better and is more complex than corporate multinational AGri production of monoculture pabulum. Human health has been aided by new tech advanced by biological research, so has carcinogenic superfund sites from the same funders of these research projects, i.e. GE (General Electric) and the fMRI vrs Dioxin risk/benefit analysis: GE makes Dioxin that gives you tumors but GE also makes MRI machines that images tumors so the tumors are a risk that benefits early cancer diagnostics and the medical industries as a whole, oh yes and the patients benefit too with new treatments for the tumors the environmental toxins produced. Well worth the gambit!

But, is mutation natural? Is an organic mutagen less dangerous? Is an organic mutagen natural until a human uses it in an experiment in organismic alteration? Are humans and their cultural drives natural or are we still part of something beyond primate: special, different, better? Don't underestimate the public's ability to understand the complexity of a project like Organic Mutagenesis. If we write up the real issues of mutation, mutation rates, cosmic radiation, random misreads and parsnip fields, the public can handle it.

Lay people are not stupid. Sometimes it is the highly trained who miss the pertinence of complexity in everyday living. The importance of fostering debate means not deciding for the public what counts as real but inciting time for reflection, re-orientation and self-cognition. We are not experts for the public to nod at. Instead, we should be presenters of real complexity for public debate. Is Biology not the study of life? Biology is not a one-sided political reading of life but life in all its nuanced interconnections, variations and alterations. Yes, my project is upsetting, as art often is.

-Random Mutation is not Evil.

Mutation occurs naturally at an unsteady rate, influenced by various anomalies in all variety of the physical miraculous. Visualize: you are a flask, a fleshy incubator and your body houses many times more bacteria than you have cells in your body. If coffee is a mutagen, (which it is, along with cigarettes, alcohol and ultrasound) and one was to consume some of this coffee substance, one is then shitting out genetically modified organisms. In particular, many scientists tend to see any application of Random mutation without a screening for utility, (i.e. No Use Value) conjoined with an intentional release as sounding dangerous. This goes back to repressed versions of original sin or the fall-back plan of getting into heaven. Presupposing that de-godified religion, watered down with materialism and engineering is humanist; random play and lack of knowledge is animal and therefore ill informed.

Consider this: eating parsnips (which contain a mutagen that can cause point mutations) is not considered bioterrorism. The truth is, the FDA and the EPA cannot prophesize any better than David Koresh. Risk assessment is a gamble, that's why it's called risk. Attempts at eliminating risk are also dangerous as lack of any action can often lead to demise. There is an essential risk to being here. The odds of anything detrimental coming from the random mutagenesis of some local protists by some local parsnips are slim... Infinitesimal, but not zero. This project may destroy the world as we know it. The fear of the anarchism of life, unfettered is greater in mass perception than the effect of rogaïne on the mites that live on your scalp or vitamin A supplements from the health food store or birth control pill estrogen remnants in urine samples. If I proposed to add rogaïne to some of the flasks or vitamin A or some norplant dust would I be inciting fear of genetic difference?

Genetic alteration happens. That's how we came from worms and now have nose hair and toe nails and notions of importance and adolescent love of life. Utilitarian mutations are a shot in the dark. We don't know what the future holds. What is the genetic effect of transgenic factories keeping so many diabetics alive on insulin made from million dollar goats and their injectable milk metabolites. I don't know and neither does Novartis. I like my diabetic friends and the fact that they don't have to shoot pig insulin. Still, the net effect of the transgenic project is a grand unknown. Even our crops and livestock breeding programs represent grand enigmas that are now part of the environment. My project is simple and deviant yes but my project is a simple and honest reflection of the generational effects. A finger in the pudding, out of the lab, risky effecting difference, basis of being alive, inter-organismic quagmire of ethics and responsibility that humans often reflect on: lay people, scientists, artists, ethicists and anarchists. To not mutate is a breeding decision. To breed for utility is an aesthetic decision. To fall in love is an aesthetic breeding decision. To brush you teeth is a form of bacterial genocide.

The ethics of alteration are not simple, but the technology supplied is not high tech. People can try organic mutagenesis at home. I would like to work on a text explaining mutation, organic mutagens, perhaps cancer maps and oncogenesis caused by toxic waste from our great fortresses of utility and rates of positive mutation vrs lethal... Followed up by a tour of novel variation in the life world. I would like to provide a sort of citizen science, do it yourself mutagenesis instruction kit for the public. I would even like to ask them what they think about the complex issues of: risk, positive mutation, carcinogenic mutagens in the environment due to human waste versus amoral sources (like radioactive sources in geological formations) and the role of the individual responsibility in the design of future life forms.

But, this is not only science, this is not mere education, this is not simply creative arts but a living mixture of these three ideals as real and enigmatic organisms, chemoalterity and, considering the odds, near risk free examples of personalizing the experience of eco-agnosticism for a populous capable of: abstract thought, respect for difficult stints of not knowing and with a real ability to decide for themselves. Organic mutagenesis is a virtually risk free way of experiencing the practice of modern molecular genetics and going beyond the corporate rhetoric. What is the anatomy of dementia built into the human desire to meddle? Is this all that is behind corporate posturing? Little kids with good PR. Angels?

I hope this helps not harms my chances. I feel like protecting the public from controversy or involvement or accountability or conceptual ability is condescending and misguided. Complexity is not for the well trained, Complexity IS.

Adam

CONCLUSION

A version of this project was performed in Moscow, Russia in 2018, as a part of Methods of Transgenesis: Shoot, Shock and Inject. In a multiday lab focused on DIY Microinjection, Electroporation and Biolistics, the organic mutagenesis of Moskva river water was performed during Art Experiment: Laboratories of Earthly Survival, Garage Museum of Contemporary Art. In the dark of frozen January night, Hackteria affiliated merry pranksters and our lab participants returned the organically mutagenized Moskva river water to the river from where it had come. The intentional release was at the foot of Zurab Tsereteli's antiart infamous statue "Big Chris" aka "Peter the Great".

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ARMONAS, MARIUS

Marius Armonas is doctoral student at the department of Art History and Visual Culture in Lithuanian Culture Research Institute. His dissertation explores the relation between posthuman, materialist philosophies and contemporary installation art practices. Armonas has lectured at Vilnius Academy of Arts and has been curating shows at private galleries and museums in Lithuania.

ARNOLD, RUDOLF

Rudolf Arnold studied mathematics and physics at the University of Ulm and became a teacher at a vocational grammar school. Since 1980 he has conducted several media education projects. He was cofounder of Radio free FM, which got on air in 1995. In 1996 he produced an award-winning radio feature about ecstasy. Since 2006 he has been a successful Cosplayer. In the role of Hatsune Miku, a teenage virtual Japanese popstar, he was an essential part of the international performance Still Be Here. 2013 he joined the smart fashion community. Since 2014 he has been an experimental musician. In 2016 and 2017 he won awards at Fashion Hack Day Berlin. In 2018 he created a novel sensor for sex researcher Dr. Nicole Prause. This sensor became the key component of a system for sonification of sexual arousal which was presented at the 4th International Congress on Love and Sex with Robots.

ATHANASEKOU, MARIA

Maria Athanasekou completed a PhD in art history at the School of Architecture, National Technical University of Athens, on the art of the Pre-Raphaelites, an MA in Renaissance Studies at the University of London, Birkbeck College and a BA in Archaeology and History of Art at the National University of Athens. Currently, she is completing her post doc research at the University of Western Macedonia on Art and Education policy. She teaches art history at Frederick University, Cyprus

and the Hellenic Open University, while in the past, among other institutions, she taught at the University of the Aegean and the National Technical University of Salonica. She has also delivered papers in a number of international conferences which have been published and contributed with chapters to books, as well as having published two e-books on art and education. She has edited and co-written the book “Why art concerns me” (Γιατί με αφορά η τέχνη, Ηδυέπεια, 2020).

BĂCĂRAN, MIHAI

Mihai Băcăran is a PhD candidate at The University of Melbourne. His research looks at questions of embodiment in relation to spectatorship in net art, asking how the interaction with online works influences what our(?) bodies ‘are’, ‘do’, and ‘mean’.

BAUR, CHRISTL

Christl Baur is the head of the Ars Electronica Festival, researcher with an interdisciplinary background in art history, cultural management and natural science. She is particularly interested in the conjunction of aesthetic and social practices the center on collaboration and experimentation and challenge dominant social, political, and economic protocols. Her research field encompasses topics such as video art, new media technologies, computer, biotechnology and interactive art, and she works at the nexus of art & science.

BOUZAS, VASILEIOS

Vasileios Bouzas studied painting at the Athens School of Fine Arts and got his MFA at the Pratt Institute of New York. He holds a Degree in Civil Engineering from the National Technical University of Athens. His work consists mainly of audio-video installations. His interests include drawing, painting, photography, audio, video, and explorations on web-art. He is currently an Associate Professor in the Department of Fine and Applied Arts at the University of Western Macedonia, Greece.

BRILL ESTRADA, DANIELA

Daniela Brill Estrada was born in Bogotá, Colombia. She finished her Master's degree in Art & Science at the University for Applied Arts Vienna, with her own hypothesis about a new fundamental force in nature written from an artistic and poetic perspective. Brill works in collaboration with artists, researchers and scientists around the world and institutions such as CERN and the ORIGIN network. Through her artistic work, Brill proposes a space where the frontiers between natural sciences, poetry and fine arts disappear. Daniela is also the creator of Cuántico and co-organizer of Suratómica, an international, self-organized network of individuals, collectives and organizations that propagates scientific and artistic thought. With a focus on Latin America and the Global South, the Suratómica network promotes new forms of dialogue between different areas of knowledge, opening spaces for creation and experimentation to strengthen reflection on science, society and alternative forms of organization.

BUIANI, ROBERTA

Roberta Buiani is an interdisciplinary artist and media scholar, and the artistic director of the ArtSci Salon at the Fields Institute for Research in Mathematical Sciences (Toronto). Her recent research creation project draws on collaborative encounters across the sciences and the arts to investigate emerging life forms exceeding the categories defined by traditional methods of classification. Her artistic work has travelled to art festivals (Myseum, Transmediale; Hemispheric Institute Encuentro), community centres and galleries (the Free Gallery Toronto; Immigrant Movement International, Queens, Cocker Architecture Gallery), and science institutions (RPI; the Fields Institute, Ryerson University). Her writing has appeared on Space and Culture, Antennae and The Canadian Journal of Communication among others. With the ArtSci Salon she has launched a series

of experiments in “squatting academia”, by re-populating abandoned spaces and cabinets across university campuses with SciArt installations. She holds a PhD in Communication and Culture from York University (CAN). ArtSci Salon website: <http://artscisalon.com> Personal <http://atomarborea.net>

BUREAUD, ANNICK

Annick Bureaud is a French Paris-based independent art critic and curator in the field of art-science and technology. She is the Director of Leonardo/Olats, the Leonardo Observatory for the arts and techno-science which is the Franco-European branch of Leonardo/ISAST.

BOURLEIGH, PAULA

Paula Burleigh is an Assistant Professor of Art History at Alleghany Collage in Pennsylvania, U.S., where she is also director of the Alleghany Art Galleries. Burleigh completed her PhD at the CUNY Graduate Center in New York, NY. She was previously a Joan Tisch Teaching Fellow at the Whitney Museum of American Art and a frequent lecturer at the Brooklyn Rail, Artforum.com, Stedelijk Studies, and in various edited volumes. Burleigh's current research project is on feminist speculative fiction in contemporary visual art.

CHALKOU, MARIA

Maria Chalkou holds a Ph.D. in Film Theory and History (University of Glasgow), sponsored by the Greek State Scholarships Foundation (I.K.Y.), and an MA in Film and Art Theory (University of Kent). Currently she is a post-doctoral researcher at Panteion University (CIVIL – Censorship in Visual Arts and Film, supported by ELIDEK) and teaches Film History, Film Theory and Documentary at the Department of Audio & Visual Arts of Ionian University. She is also the editor in chief of *Filmicon: Journal of Greek Film Studies*. Her research interests focus on film cultures of the 1960s, Greek Cinema, contemporary European cinema, film

ensorship, film criticism and cinematic representations of the past. She has also researched and co-directed the documentary *Oneira Mikrou Mikous* (1960-1967) [Dreaming in ‘Shorts’ (1960-1967)] for the TV program *Paraskinio* (2007).

CLOUSTON, NICOLE

Nicole Clouston is a practice-based researcher based in Burlington, Ontario who completed her Ph.D. in Visual Art at York University. Nicole works at the intersection of art and science to explore the enmeshed nature of life. She has exhibited across Canada and internationally, most recently in Berlin, Germany. She was the artist in residence at the Bio Art Lab at the University at Buffalo and at Idea Projects: Ontario Science Centre’s Studio Residencies at MOCA.

COSTA, PÊDRA

Pêdra Costa is a ground breaking, formative Brazilian, urban and visual anthropologist and performer based in Berlin that utilizes intimacy to connect with collectivity. They work with their body to create fragmented epistemologies of queer communities within ongoing colonial legacies. Their work aims to decode violence and transform failure whilst tapping into the powers of resilient knowledge from a plethora of subversive ancestralities that have been integral anti-colonial and necropolitical survival.

DE LUTZ, CHRISTIAN

Christian de Lutz is a curator and visual artist, originally from New York. As co-founder and co-director of Art Laboratory Berlin he has curated over 40 exhibitions. His curatorial work focuses on the interface of art, science and technology in the 21st century, with special attention given to BioArt, DIY Science initiatives and facilitating collaborations between artists and scientists.

DE MENEZES, MARTA

Marta de Menezes is a Portuguese artist

(Lisbon, 1975) with a degree in Fine Arts by the University in Lisbon, and a MSt in History of Art and Visual Culture by the University of Oxford. She has been exploring the interaction between Art and Biology, working in research laboratories demonstrating that new biological technologies, DNA, proteins and live organisms can be used as an art medium. Her work has been presented internationally in exhibitions and articles. She is since 2005 artistic director of Ectopia – Experimental Art Laboratory and from 2009 director or Cultivamos Cultura – Association.

DI SABATO, VALERIA

Valeria Di Sabato aka Alvax is a international sound designer, sound artist and media artist. She is based in Sicily and Milan. She started to delve into sounds at a young age learning the basics of daws and was producing electronic music on her computer. Fascinated by the sounds surrounding her life she went to study Sound Design in Milan at The European Institute of Design (IED). During this period she performed her music at “La Triennale” of Milan, at Leoncavallo and in other festivals. She also did a media installation “Frag-mented underwater” at (T)Raum Space in Milan, combining hydrophones water recording, granular synthesis and videomapping. She worked with many international artists in the audio field like Bill Fontana who gave her new ideas and ways to approach audio recording. She is also part of Piano9Produzioni movie company based in Italy as sound designer.

DIAMANTOPOULOU, EVAGUELIA

Evaguelia Diamantopoulou is an assistant professor at the Department of Communication and Media Studies of the National and Kapodistrian University of Athens. She is a member of the Hellenic Section of the International Union Art Critics AICA GREECE and of the Association of Greek Artist Historians. Her BA and MA courses are related to

issues such as History of Art, Visual Arts and Communication, Image Dialectics, Issues of European Art, Issues of Modern and Contemporary Greek Art, Artistic Portraits, Issues of Artistic Creation. Her academic interests focus on Art and Communication, Art and Society, Issues of Identity in Art, Symbolic and Experienced Space in Visual Arts, Art and Play, Art and Historical Memory. Her published academic work includes 4 books, as well as many research projects in Greek and International interdisciplinary journals concerning matters of Art and Culture.

DOAN QUOC, KIM

Kim Doan Quoc is a multi-disciplinary artist from Lille, France, where she graduated with an MFA of visual arts in 2016. Her work ranges from photography, video, immersive installation and projection mapping to writing and performance. Since 2015, her work as a visual artist and performer has been shown internationally in places such as Trafo theater (Budapest), Le Wonder (Paris), Le Nova (Brussels), TTT 2018 (Mexico City), Fashion Week SS2018 (Berlin) and the Queens Museum (New York City)... Her body of work uses representations of the body, gender and landscape to question the place of human beings in nature. She collaborates with artists and scientists to explore the relationships between culture and nature.

DUDECK [M]

[M]Dudeck is an artist, witchdoctor and cultural engineer who invents their own religion as art. They have performed, exhibited, screened and published in over twenty-five countries and in over fifty independent commissions worldwide, including Witte de With (Holland), Grazer Kunstverein (Austria), KW, Museum Insel Hombroich and Hamburg Maschine (Germany), The Brucebo Museum (Sweden), and in various international festivals and conferences such as the International Festival of Performative Art (Belarus), Elastic (UK), LAPSody (Finland),

Encuentro (Montreal), Pomada (Poland), and Moscow International Biennale for Young Art (Russia) among many others. They are currently a Practise-led PhD student at Edinburgh College of Art and work between Edinburgh/Glasgow Scotland and Rome Italy. Their work has been published in peer-reviewed journals, artistic publications, web-based multimedia articles and exhibitions, as well they are the Co/Director, alongside Martina Raponi, of The Ansible Institute, a nomadic research laboratory exploring science fiction as strategy in the information age.

FOKA, AMALIA

Amalia Foka (b. Greece) is a Creative Artificial Intelligence Researcher and educator who explores the intersection of computer science and art. Her work makes use of different artificial intelligence technologies and social media data to generate and study art. She is currently an Assistant Professor in Computer Science: Multimedia Applications for the Arts at the School of Fine Arts, University of Ioannina, Greece. Her work has been presented in many international conferences and journals, including Leonardo Journal (MIT Press) and the WRO Media Art Biennale. She holds a BEng in Computer Systems Engineering (1998) and an MSc in Advanced Control (1999) from the University of Manchester Institute of Science & Technology (UMIST) in the United Kingdom. She also holds a PhD in Robotics (2005) from the Department of Computer Science of the University of Crete, Greece.

GIANNAKOULOPOULOS, ANDREAS

Andreas Giannakoulopoulos is an associate professor at the Department of Audio and Visual Arts of the Ionian University, where he teaches courses related to internet communication, new media and the web technologies. He holds a BA in economics from the University of Athens (UoA), a BA in communication and media studies from UoA, a Master of

Arts in communication and media studies from UoA and a Master of Science in logic from the University of Amsterdam. His doctoral dissertation, approved by the University of Athens, was in the field of web accessibility. The main fields of his academic activities are computer mediated communication, web technologies and e-learning systems as means of effective communication via the web. In relation to his academic interests and activities, he has extensive experience in practical web development especially for academic and scientific projects.

GIANNOU, ROXANI

Roxani Giannou holds both a BA and MA in Fine Art, completed in Greece and Middlesex University in London respectively. She obtained her MA in the History of Western Esotericism at the University of Exeter specialising in the use of Symbols by C.G.Jung. She has worked at TATE, the Royal Academy of Arts and the Victoria & Albert Museum, where she was also trained in Museology, Cultural Institute Management and Museum Education Programs. Since 2013 she has lived in Greece where she creates and facilitates art workshops, including at Herakleidon Museum where she organises art programs which incorporate interactive practices with art theory. She is an art tutor at Open Education Institute, training school teachers to create art workshops for students. She is currently training to be a Family Therapist / Counsellor and is also attending an Art Therapy course, planning to combine art with psychology in her practice.

GOGOVA, ANDREA

Andrea Gogova is currently a PhD candidate of Multimedia and Design at FMK Tomas Bata University in Zlín, Czech rep. She was born in Martin, Slovakia. Andrea Gogova was educated at Academy of Fine Arts and Design, Bratislava Slovakia and graduated both a Masters degree in Design and Bachelors degree in Visual Communication. In 2019

she was an Erasmus doctoral student in the Metatechnicity research group at Cardiff Metropolitan University in UK and also a Freemover doctoral student at Ionian University in Corfu in Greece. As the part of her research she practised at “f.e.a” - Forum Experimentelle Architektur – Museums Quartier in Wien in the position of Erasmus doctoral student. In her transdisciplinary research, spanning Art & Design, Science, Technology and Electronic Literature, she focuses in the process based theoretical paradigm into digital typography. In her arts practises she is interested in creative possibilities of a digital text layout which is based on the transition from grid to rhizome.

GONZÁLEZ VALERIO, MARÍA ANTONIA

María Antonia González Valerio holds PhD in Philosophy from the National Autonomous University of Mexico (UNAM) with postdoctoral studies in the area of aesthetics. Full-time professor of the Faculty of Philosophy and Literature. She works within the research line of ontology-aesthetics and the interdisciplinary line of arts, sciences and humanities. Head of the research group Arte+Ciencia (Art+Science) which gathers artists, scholars and scientists in an interdisciplinary work that produces education at an under and postgraduate level, specialized theoretical research, artistic productions and exhibitions, www.artemasciencia.org Leader of the research project “Medium and Species: Ecology and Evolution within Philosophy of Nature” Author of the books: *Cabe los límites. Escritos sobre filosofía natural desde la ontología estética* (México: UNAM/Herder, 2016), *Un tratado de ficción* (México: Herder, 2010) and *El arte develado* (México: Herder, 2005). Coordinator of the artistic collective “BIOS Ex Machina: Workshop for the fabrication of the human and the non-human” which develops projects of transgenic and biotechnological art. She has also worked as curator of exhibitions on art and science.

HADZI, ADNAN

Adnan Hadzi is currently working as resident academic in the Department of Digital Arts, at the Faculty of Media and Knowledge Sciences, University of Malta. Hadzi has been a regular at Deckspace Media Lab, for the last decade, a period over which he has developed his research at Goldsmiths, University of London, based on his work with Deptford.TV. It is a collaborative video editing service hosted in Deckspace's racks, based on free and open source software, compiled into a unique suite of blog, film database and compositing tools. Hadzi is co-editing and producing the after.video video book, exploring video as theory, reflecting upon networked video, as it profoundly reshapes medial patterns (Youtube, citizen journalism, video surveillance etc.). A thorough multifaceted critique of media images that takes up perspectives from practitioners, theoreticians, sociologists, programmers and artists, presenting a publication which reflects upon video theoretically. Hadzi's documentary film work tracks artist pranksters The Yes Men and !Mediengruppe Bitnik Collective. Bitnik is a collective of contemporary artists working on and with the Internet. Bitnik's practice expands from the digital to affect physical spaces, often intentionally applying loss of control to challenge established structures and mechanisms. Bitnik's works formulate fundamental questions concerning contemporary issues.

HELYER, NIGEL

Nigel Helyer an internationally prominent sculptor and sound artist, is a contemporary polymath whose interdisciplinary practice combines art and science to embrace our social, cultural and physical environments. He brings these concerns together in creative projects that prompt the community to engage with their cultural histories, identity and sense of place; inviting us to examine the abstract conditions of our world and our complex relationships to it.

HIGH, KATHY

Kathy High is an interdisciplinary artist working with technology, art and biology. She is Professor in Arts, and has a lab at the Center for Biotechnology and Interdisciplinary Studies, Rensselaer Polytechnic Institute, Troy. She collaborates with scientists and artists, and on living systems, empathy, animal sentiment, and the social, political and ethical dilemmas of the biotechnology and surrounding industries. She has received awards including the Guggenheim Foundation, Rockefeller Foundation, and National Endowment for the Arts. Her art works have been shown at documenta 13 (Germany), Guggenheim Museum, Museum of Modern Art, Lincoln Center and Exit Art (NYC), UCLA (Los Angeles), Science Gallery, (Dublin), NGBK, (Berlin), Festival Transitio_MX (Mexico), MASS MoCA (North Adams), Para-site Gallery (Hong Kong), and Esther Klein Gallery, Science Center (Philadelphia). She is project coordinator for the urban environmental center, NATURE Lab, with the community media organization The Sanctuary for Independent Media, and is also on the board of directors.

HOŁUBOWSKA, ZOSIA

Zosia Hołubowska (born in 1988 in Poland) is a queer sound artist, musician, and music curator, working and living in Vienna since 2016. They explore archives of folk Eastern European music, as well as traditions of magic, herbalism, and demonology, and experiment with archaic ways of singing to create queer soundscapes, installations, performances, and audio essays. They also create sound designs for performances. Most recently they have been curating and coordinating a queer synth laboratory Sounds Queer? Where they organize, facilitate, and run workshops on electronic and synthesizer music for women, queer and non-binary people. Currently, they are Ph.D. Fellow at the Academy of Fine Arts. Their research deals with experimental queer methodologies in sound art and

singing as a knowledge creation process. Holubowska has performed in Mumok (Austria), Guggenheim Museum (Bilbao, Basque Country), La Gaité Lyrique (Paris, France), AMOQA (Athens, Greece), Sluice Gallery (London, UK); their last sound installation was shown at the Research Pavilion in Venice (Italy).

HOLZINGER, FLORENTINA

Florentina Holzinger studied choreography at the School for New Dance Development (SNDD) at the Amsterdamse Hogeschool voor de Kunsten. Her Diploma solo work *Silk* was awarded the Prix Jardin d'Europe at the *ImPulsTanz* Festival 2012. She collaborated with Vincent Riebeck for a trilogy of pieces, *Kein Applaus für Scheiße*, *Spirit*, and *Wellness* followed by *Schoenheitsabend- Tänze des Grauens und der Extase* (2011-2015). Her second solo work premiered in 2015 – *Recovery* is an experimental consideration on a traumatic stage accident she had suffered and critically explores various kinds of female representation as well as the potential of female corporality. In her latest works she continued dissecting the narratives of ballet: first with *Apollon* (2017)-a hack on Balanchines's 1920s *Apollon Musagete*, followed by *TANZ*, an action ballet that reflects on tradition and narrative departing from the romantic ballet *La Sylphide*. Her latest work *Etude for an Emergency*, is a stuntopera developed with a cast of opera singers and stuntactresses-a musical composition for 10 bodies and a car. Florentina Holzinger's dance pieces are driven by the notion of identity, sexual and physical transgression. Drawing inspiration as much from Viennese Actionism, body art and bodybuilding as from classical ballet, cabaret and even circus, she deconstructs, performance after performance, the very definition of femininity. Along her stage works Florentina is regularly teaching movement classes and offers trainings. Her work is intrinsically linked with the aim of exploring modes of embodiment and the development of

practices to support a physical life in action. Her practice is heavily informed by martial arts, functional and somatic movement practices as well as everything dance.

HONORATO, DALILA

Dalila Honorato, Ph.D., is a facilitator of safe spaces for hosting the interaction of ideas around liminal issues in the frame of *Art&Sci*. Her research focus is on embodiment, monstrosity, the uncanny and the acrobatic balance between phobia and paraphilia. She is an associate professor in aesthetics and visual semiotics at the Ionian University, Greece, and collaborator at the Center of Philosophy of Sciences, University of Lisbon, Portugal. She is one of the founding members of the *Interactive Arts Lab*, is the head of the steering committee of the conference *Taboo – Transgression – Transcendence in Art & Science*, and, together with Marta de Menezes, the conceptualizer and developer of the project '*FEMeeting: Women in Art, Science and Technology*'.

HOPKINS BROCCQ, JOSE

Jose Hopkins Broccq is a practice-based and critical writing researcher. In his work, he combines approaches from the visual arts, and performance with insights from new materialisms and affect theory. Much of his research is focused on technologies' affordance on incorporative and expansive embodiment and trans-individual assemblages, with a special interest in the complex ecologies of human and non-human. His current research includes the possibilities XR technologies, namely VR, can afford to sensuous experiences, archive making and museum practices. Hopkins has experience in community-based participation, curatorial practices and the study of the effects that poetic practices can have on public space configuration and place-making.

HORVATH, MARK

Mark Horvath is a researcher affiliated with Eötvös Loránd University, Budapest.

Horvath's interests include Continental philosophy, posthumanism, and aesthetic approaches to the Anthropocene. Co-founder of Absentology with Adam Lovasz.

JAKAB, ZSÓFIA

Zsófia Jakab is an interdisciplinary artist and early career researcher from Hungary, who is currently based in Scotland. She has a BA in English Literature from Eötvös Loránd University, Faculty of Humanities and a MFA in Art and Humanities from Duncan of Jordanstone College of Art and Design. In her research and art practice she is primarily interested in the process of metamorphosis; the in-between existence. Through using Surrealist aesthetics and research on Posthumanism, she's interested in the experience of being inside one's body; the way transformation is enacted through physical objects, forms, textures, materials.

JOHNSON, KIMBERLY

Kimberly Johnson is an American art historian, currently teaching at the University of Alberta in Edmonton, Canada. Her specializations include: utility and innovation in the visual culture of anatomical models, anthropodermic bibliopegy as pedagogy, materiality of bodily representation in contemporary artistic practice and the phenomenology of museum experience through the lens of disability. Currently, Kimberly is working on three projects: a history of the figure of the drowned woman; an exciting project on early modern international trade and its impact on contemporary Indigenous sculptural practice; and completing her book on the contemporary display practices of Gunther von Hagens' BODYWORLDS plastinates. When she isn't teaching, researching or working on project development, Kimberly enjoys shocking colleagues, friends, family and acquaintances with photos of unusual and unsettling anatomical specimen and works of art that she will inevitably incorporate into her work.

KAZUHIRO, JO

Jo Kazuhiro was born in Fukushima in 1977. He is a practitioner with a background in acoustics and interaction design. He has been presenting his practices as works of art at museums and festivals as well as through publishing papers in international journals and conferences about his projects.

KEDZIORA, ANNA

Anna Kedziora was born in 1982 in Poland. Visual artist and curator. Teaches at the Photography Faculty, a former head of Photography Part-time Program (2016-2019) at the University of the Arts in Poznan, Poland. Co-founder and manager of an international photography competition Poznan Photo Diploma Award. Co-curator and curator of photography exhibitions (eg. during: Photokina Academy in Cologne, DE 2014; TIFF festival in Wroclaw, PL 2016; the European Month of Photography in Berlin, 2016; Riga Photo Month 2019, LT; Chiang Mai Photo Festival 2020, TH). Her artistic research focuses on so called „Conflicted Landscapes”. She has worked i.a. on the notions of Landscape & Power, Landscape & Trauma, Landscape of Loss. Her main medium is photography and video, she experiments with ceramics and installations. Presented her works in several individual and group exhibitions and conferences in Poland, Germany, Austria, Slovakia, Lithuania, Belarus, Spain, Sweden, Greece, Wales, Korea, Indonesia.

KIAIS, FRANCESCO

Francesco Kais is an Italian artist, independent art writer, and curator Francesco Kiàis is currently based in Athens. He is the founder and director of the initiative [mind the] G.A.P. - Gathering Around Performance, as well as an associate curator of the Venice International Performance Art Week. In the last years, developing his personal path and method regarding the theory and practice of performance art, Kais

collaborated with different educational programs, holding workshops and lectures, also for several universities. Lately he focused on creating moments of gathering in social distancing times, looking for a generative relationship between the individual, technology, and society.

KSENIA, YURKOVA

Ksenia Yurkova (1984) is an artist, curator and researcher, living between Russia and Austria. She considers her leading artistic media to be text, photography, video and installation. Yurkova started her practice as a researcher in the field of political theory and communication theory. The main focus of her interest for a long time was communication and language: the varieties of its substance, the possibility of conversion, its mythological aspect, stereotyping (the question of personal and political self-identification and identification by others), problems of memory, attitudes, and reliance. Lately, the artist is researching the phenomenon of affect in its autonomous bodily emanation; in its personal and political registers. She focuses upon how a stage of individual perception, to which one can relate memory, traumatic recollection and problems of identity construction, transforms itself into affects of the political body.

LAMOUNIER, NATACHA

Natacha Lamounier (1991, Brazil) is an artist and researcher in the Media Arts field with a multidisciplinary background. She holds an Erasmus Mundus scholarship in a Master mobility program from the Universities of Krems (Austria), Aalborg (Denmark), and Lodz (Poland). She lives currently in Denmark. She has a degree in Materials Engineering from the Federal Center for Technological Education of Minas Gerais (Brazil) and in Fashion Design at the Federal University of Minas Gerais (Brazil). Natacha worked on interactive wearables research and is also interested in the relations of the

human body and nonhumans (animals, machines, environment), post-humanism, and feminist studies. The laboratory is one of her favorite places to be, but she also dedicates her time to painting, sewing, and mountain biking.

LAPOINTE, FRANÇOIS-JOSEPH

François-Joseph Lapointe is an arts scientist from Université de Montréal (Canada) with a PhD in evolutionary biology and a PhD in dance and performance studies. As a scientist, he has published over 120 papers ranging from molecular systematics and population genetics to metagenomics. As an artist, he applies biotechnology as a means of creation, and has created the field of choreogenetics. His research has been funded by the National Science Foundation (USA), Genome Canada, the Natural Sciences and Engineering Research Council (NSERC), the Social Sciences and Humanities Research Council (SSHRC), the Fonds de recherche du Québec – nature et technologies (FQRNT) and Fonds de recherche du Québec – Société et Culture (FRQSC). His work as a bioartist and performance artist has been exhibited at Musée de la civilisation (Québec), Transmediale (Berlin), SciArt Center (New York), Ars Electronica (Linz), Medical Museion (Copenhagen), Science Gallery (London), and Centre Pompidou (Paris), among other places. “

LEVENTI, EVMORFIA

Evmorfia Leventi graduated from the Department of Philosophy and Social Studies of the Faculty of Philosophy of the University of Crete. She completed postgraduate studies in Special Education at the University of Cyprus Frederick. Having been trained in the use of psychometric tools and diagnostic tests, she has the knowledge to administer, intervene, evaluate and interpret examination results. She has completed a training program in Special Education from the University of the Aegean and the

Pedagogical Institute. For the past nine years she has been working in the field of education, evaluation and intervention for children with learning disabilities and additional behavioral problems. She is currently training to become a Counselor (Synthetic Model) at Synthetic Counseling, the course is certified by the European Federation of Integrative Counseling & Psychotherapy. Currently, her research interests include the study of the effects of Art and Nature on students with learning disabilities and how it affects the entire educational process.

LoCASCIO, MONICA C.

Monica C. LoCascio is a mixed-media artist whose work arrives as artifacts of her material and theoretical research on somatic therapies, epigenetics, biological and natural geometries, fermentation, and hierarchies of knowledge and power. LoCascio (b. 1984) has lived in Saudi Arabia, Malaysia, Morocco, and the United States. She received her BA with honors in New Media & Visual Arts in 2006 from Emerson College in Boston, and her MA with honors in Art&Science from Universität für Angewandte Kunst in Vienna, Austria. Her work has been shown at the Biennale Sessions at the Venice Biennale 2019, the Museum of Natural History of Vienna, The Academy of Fine Arts Krakow, OÖ Kultur Quartier Linz, and the Angewandte Innovation Lab. She was nominated for the Kardinal Koenig Kunstpreis 2021 and serves on the inaugural board of the Medicine & Media Arts Initiative at UCLA. She lives and works in Vienna, Austria.

LOPES, MARIA MANUELA

Maria Manuela Lopes is a visual artist whose practice is transdisciplinary, investigating relations of memory and identity informed by the biological sciences and medical research; her work appears in a varied format within the visual arts resulting in multimedia installations, drawings and performances and biological materials. Lopes studied sculpture at FBA-

UP and did an MA at Goldsmiths College in London. She has a Doctorate in Fine Arts and New Media at the University of Brighton and UCA-Farnham in the UK. She has developed a Postdoctoral Art Research Project at the University of Aveiro and Porto - i3S Institute of Research and Innovation in Health. She is currently a researcher at i3S as co-responsible for the Cultural Outreach Art/Science interface. Lopes is a Professor at ISCE Douro and part of the Direction board of the International Music Academy Aquiles Delle Vigne. She is co-founder + Deputy Director of Portuguese artistic residency programs: Ectopia - Laboratory of Artistic Experimentation and Cultivamos Cultura in the Natural Park of São Luis, Odemira in Alentejo/Portugal.

LOUFOPOULOS, APOSTOLOS

Apostolos Loufopoulos works with sound and digital media and is interested in the sound of the natural world and its potential for musical exploration. He holds a PhD from City University, London and he is appointed as Assistant Professor at the Ionian University, Department of Audio & Visual Arts (GR). He has performed in renowned festivals of contemporary music and has received a number of awards at international competitions such as Ars Electronica (AT). In academic research, he has worked on important projects regarding the creative study on environmental sound and he is a founding member of HELMCA and the Greek Society for Acoustic Ecology.

LOVASZ, ADAM

Adam Lovasz is a researcher affiliated with Eötvös Loránd University and the Hungarian Academy of Sciences. Lovasz's interests include Continental philosophy, posthumanism, OOO, and cultural studies. Co-founder of Absentology with Mark Horvath.

MADSEN, TINA MARIANE KROGH

Tina Mariane Krogh Madsen (DK) is an artist and researcher, who works in the

intersection between performance art, sound, open technology, and matter. Madsen is currently a doctoral candidate at Aalto University School of Arts, Design and Architecture (FI), researching in environmental, ethico-aesthetic performance art and affective relations in the context of climate change. Madsen has an art educational background from the College of Arts, Crafts and Design (DK), where she began studying performance art in 1999, and holds a Master of Arts in Art History from Aarhus University (DK). Madsen is additionally the founder of performance protocols, a nomadic platform for instruction-based art and collaborative processes.

MANFÉ, MICHAEL

Michael Manfé, born in 1967, in Mittersill, Austria, studied Communication, Politics and Pedagogy in Salzburg and Vienna. He obtained his Magister degree at the Paris Lodron-University of Salzburg in 2000, his doctorate at the University of Vienna in 2004. His main fields of research are the effects of media on social behavior and aesthetics.

MATSUTANI, YOSAKU

Yosaku Matsutani was born in Osaka, Japan, 1976. Ph. D. in Literature. Associate professor at the Faculty of Letters Department of Philosophy at Kokugakuin University, Japan. He specializes in aesthetic, art and media theory, and visual culture studies.

MCDERMID-HOKANSON, JILL

Jill Mcdermid-Hokanson has M.A and M.F.A. in Intermedia and Performance Art from the University of Iowa. She is the Founder Director of the Grace Exhibition Space for International Performance Art in New York City, offering live performance art exhibitions for the public to experience visceral and challenging new works by domestic and international performance artists.

MESSINEZIS, LUC

Luc Messinezis is an artist and researcher working across sound, installation, and performance. He holds an MA in sound arts awarded by the University of the Arts London and his practice oscillates between aural awareness, anthropology, notions of reality and authenticity. Luc usually aims to mediumizing the audience by placing them at the epicenter of the work fusing gesture, aesthetics, and message into an enhanced reality. He has presented several of his artworks in venues across the globe and currently scrutinizes 'Aural Simulacra' as PhD candidate at the Ionian University. Notable activities include presentations, Ethnographic Terminalia 2011 (CA), Athens Digital Art Festival 2015 (GR), minus20degree festival 2020 (AT) and Ars Electronica 2020 (AT) among others. Luc has also presented his research in a multitude of international conferences and publications. Finally, Luc was nominated for the ScreenGrab7 Media Award (AU) for his work 'The Modern book of Cynics' in 2015.

MIRZA, ZAHRA

Zahra Mirza is a lifelong learner from Pakistan, now living in Austria. She has an educational background in Sculpture and her professional experience extends into public service content and art direction for print and television media. She is also former director of RetroArts; artists platform in Pakistan. She has conducted design seminar and fiber arts studio courses at Beaconhouse National University, Lahore and sculpture workshops for Community College, Kunsthalle Wien and Academy of Fine Arts, Vienna. Currently, she is a student at the department of Cross Disciplinary Strategies and works as a tutor at the department of Media Theory at University of Applied Arts, Vienna.

NISHIJIMA, PAULA

Paula Nishijima is a visual artist whose research-based practice includes

intersections with life science, technology, and participatory social practice. Exploring individual and collective motivations, either through happenings or longer processes of interaction, her production materialises into different digital media, such as video, web applications and photography. Paula received an MA in Arts and Culture from Leiden University (NL) and holds a BA in Visual Arts from the Universidade Estadual Paulista Júlio de Mesquita Filho (BR). Selected exhibitions include 'Teachable Moment', Stove Works, Chattanooga, Tennessee, USA (2020); 'Here and Now', Media Art Festival Friesland, Leeuwarden, Netherlands (2021) and Mutant Institute of Environmental Narratives, Matadero Madrid, Spain (2019). She is part of Translocalia (www.translocalia.com), a network of artists, curators, designers, and professionals from different domains that plan for the future through art.

NOBUHIRO MASUDA

Masuda was born in Kyoto, Japan, in 1984. With a Ph.D. in Literature, he is a Lecturer at the Faculty of Design in Kyushu University. He has specialized in aesthetics and the theory of art, image and media. Starting from the research on the history and theory of scientific photography, his current interests include the relationships between bioart/biotechnology and animation, digital technology and the Internet.

OLIVEROS MEDIAVILLA, MIGUEL

Miguel Oliveros Mediavilla, PhD, is an artist, hacker and academic. Associate Professor at University Antonio Nebrija in Madrid. Participant and co-leader at the international network "Women on the Move – WEMov": COST Action (CA19912).

PEÑA, LORENA LO

Peruvian interdisciplinary performance artist and independent cultural manager. M.A. Contemporary Performance Making, University of Brunel and M.A. Creative Producing for Live Performance,

University of London, Birkbeck College, United Kingdom. Co-founder and director of the 14 year old pioneer independent art-space and project egalpon.espacio. Her work as a Performance artist is interdisciplinary and crosses the liminal spaces between physical action, body art, multimedia, interactive and interdisciplinary performance. She creates her work within the themes of gender, identity, and body politics, with a documentary and autobiographical approach. Since 2010, she has presented her performance work and conferences at various international festivals, seminars, residencies and programmes in Peru, Cuba, Brazil, Colombia, Mexico, Chile, Argentina, Denmark, the United Kingdom and Germany. Currently she is Art Professor at Pontificia Universidad Católica del Perú (PUCP), Universidad Científica del Sur (UCSUR) and Universidad Peruana de Ciencias Aplicadas (UPC).

RAPP, REGINE

Regine Rapp is an art historian, curator and co-director of Art Laboratory Berlin. Her research focuses on art in the 20th and 21st century: Installation Art, Text and Image Theory, the Artist Book, and Art & Science Collaborations. As co-founder of Art Laboratory Berlin (2006), she has curated and researched on more than 40 exhibition projects: including the Time and Technology (2011/12), Synaesthesia (2012/13), [macro]biologies & [micro]biologies (2014/15), Nonhuman Subjectivities (2016/17) and Nonhuman Agents (2017/18) series of exhibitions, as well as numerous performances, workshops, and conferences.

REICHLÉ, INGEBORG

Ingeborg Reichle holds a PhD in Art History from the Humboldt University (HU) in Berlin with postdoctoral studies in the area of visual culture. She teaches and writes on contemporary art, new technologies, and new media with a focus on biotechnology and artificial life. Currently, she holds the

position of a Senior Fellow at the Institute for Advanced Sustainability Studies (IASS) in Potsdam; until 2021 she held the position of a full professor of Media Theory and served as chair of the Department of Media Theory at the University of Applied Arts Vienna, she was also the Founding Chair of the Department of Cross-disciplinary Strategies (CDS), where she set up an integrated BA study programme on applied studies in art, science, philosophy, and global challenges. Before joining the University of Applied Arts Vienna in 2016 she was FONTE professor at Humboldt University (HU) in Berlin. She is the author of the books *Art in the Age of Technoscience: Genetic Engineering, Robotics, and Artificial Life in Contemporary Art* (Springer, New York 2009), and *Kunst aus dem Labor: Zum Verhältnis von Kunst und Wissenschaft im Zeitalter der Technoscience* (Springer, Vienna, New York 2005).

RICH, BYRON

Byron Rich is an artist and professor exploring speculative design, biology futures, and tactical media. He was born in Calgary, Canada, and currently lives and works in western Pennsylvania. He received an MFA in Emerging PRactices from the University at Buffalo and serves as Assistant Professor of Art and Director of Art/Science + Innovation at Allegheny College.

RISBA, JATUN

Jatun Risba – ‘ki’ – is a transdisciplinary artist, linguist of kinship and parrhesiast exploring beyond human paradigms. By approaching Art, Science, Technology in terms of ritual mysticism, ki recovers ecopoetry and magic in contemporary societies. Since 2014, Risba has been developing the practice of ‘Interesse. Dance of Life’ which consists of liminal somatic and vocal expressions in a state of trance. These ‘arts of self’, enacted among and with others, create opportunities to reveal, share and immunize oneself while

acknowledging the divine comedy of life. Through developing a vernacular form of English named ‘Language of Kinship’ that is based on the use of alternative pronouns ‘ki’ (sing.) and ‘kin’ (poss., plur.), Risba is extending the notion of selfhood and care to all spectrums of life. Risba holds a BA Hons from NABA, Nuova Accademia di Belle Arti Milano and a PGC in Art and Science from University of the Arts London.

SAMSONOW, ELISABETH VON

Elisabeth von Samsonow artist, professor at the Academy of Fine Arts, Vienna, visiting professor at Bauhaus University Weimar (2012), member of GEDOK Munich. With an international exhibition and curatorial activity, von Samsonow teaches and researches on philosophy and history in relation to a theory of collective memory, on the relationship between art, psychology and politics in history and the present, on the theory and history of the image of women and the female identification (girl theory), sacred androgyny and modern “ego decay”. Her artistic work includes sculpture, performance, painting and video. Among other things, she deals with the systemic and symbolic location of female sculpture in the canon of the arts and an ecological aesthetic or geo-logic of the body.

SANTOMIERI, JOHN

John Santomieri is a plant-based, media artist practicing in Buffalo. His work integrates art, horticulture, and theory to conceptualize nonhuman representation and the interrelationships of human ecology. He is influenced by professional work in horticulture and public gardening, and his study of urban sociology at Tulane University, and the University at Buffalo where he received his BA and MFA, and SUNY Niagara where he received his AAS degree in horticulture.

SARATXAGA ARREGI, ARANTZAZU

Arantzazu Saratzaga Arregi holds a

PhD in Philosophy & Aesthetics from the University of Arts and Design in Karlsruhe. Her research focuses on the interior of milieus (endomilieus) from a philosophical point of view and draws on disciplines such as media and contemporary philosophy as well as cybernetics. . She attempts a processual ontology of endomilieus, which form a focal point of matrixial philosophy. An epistemology for complex systems and self-organising processes informs her current research. Most important publication: „Matrixiale Philosophie. Mutter – Welt– Gebärmutter: Zu einer mehrwertigen Ontologie“.

SCHWARZ-PLASCHG, CLAUDIA

Claudia Schwarz-Plaschg is a social scientist, mystic, and writer with a long-standing interest in spirituality, art, and social change. Her academic background is in media studies, English and American studies, sociology, and science and technology studies. She has also received training in existential psychotherapy, spiritual counseling, and collective trauma healing. Claudia is currently employed as a postdoctoral researcher at the University of Vienna. In the past years, she has been a visiting scholar at Harvard and MIT as part of her EU-funded Marie Skłodowska-Curie project, in which she explored re-emerging research on and attempts towards medicalizing and decriminalizing psychedelic substances in the United States. Her research interests revolve around the sociopolitical dynamics of (re-)emerging scientific fields, governance processes, democratization, ethics, social movements, feminism, science-art-spirituality-entanglements, and alternative subjectivities.

SHIBUYA, FELIPE

Felipe Shibuya was born in 1986, in São Paulo, Brazil. He studied Ecology and Nature Conservation at the Federal University of Paraná, where he earned his Ph.D. In his artistic-scientific research, he always highlights the visibility of nature,

such as the colors and shapes of bacteria. Currently, he is an M.F.A. candidate in Studio Art at the University at Buffalo, working at the intersection between biology and art.

SPEROU, NIKI

Niki Sperou is a South Australian artist with two decades of engagement within the nexus between art, science and culture. Since 2006, she has been the resident artist at the Department of Medical Biotechnology, Flinders University. Her interest in contemporary innovations in technology, the body and her cultural background have led her to draw parallels between biotechnology and ancient Greek cultural paradigms; these connections often emerge in chimerical forms and concepts. Sperou is currently working towards the research and development of biodegradable marine algal bio-plastics for societal, medicine and industry applications, as the 2020 recipient of the Australian Network for Art and Technology, Synapse residency recipient at the Centre for Marine Bioproducts Development, Flinders University. She has exhibited, published papers in peer-reviewed art and science journals (Artlink, Leonardo & Antennae), presented conference papers and conducted bio-art workshops internationally.

SPRENGER, JULIA

Julia Sprenger is a PhD candidate at the University of Vienna, researching for her dissertation project *Schauplatz Körper. Geschlechterinszenierung in der Body Art - Zwischen Stereotypen und Subversion* which is located in the field of performance theory and -practice at the interface of gender studies. During her studies of theatre, film and media at the University of Vienna, she focused on body art, examining connections between the participation of the audience, game theories, psychological mechanisms of power and the collective evil. She is interested in feminist theory, theories

of the body, art history, performativity, intermediality, art and politics. Julia Sprenger is based in the Department of Philosophy at the University of Applied Arts Vienna.

TAKUYA, ISHIKAWA

Takuya Ishikawa is a practitioner with a background in design research. After working as UI/UX designer, he joined the Institute of Advanced Media Arts and Sciences (IAMAS) in 2013 and became an educator at the Yamaguchi Center for Arts and Media (YCAM) in 2016. Since 2020, he has been a full-time lecturer at the Kyoto University of Arts, Department of Information Design. He has been involved in the planning and production of music events, workshop, and cultural policy research.

TAMAKI, ROY

Roy Tamaki was born in Miyagi, Japan Prefecture in 1981. Lives and works in Tokyo. He released six music albums and performed at various music festivals in Japan and foreign countries. Additionally, he has created performances, installations, film music, advertising music, picture books, etc. He also creates many collaborative works.

TOISTER, YANAI

Yanai Toister is an artist, curator and educator serving as Director of the Unit for History and Philosophy at Shenkar College of Engineering, Design and Art in Israel. Toister's artworks have been shown in numerous solo and group exhibitions (including Sandroni.Rey, Los Angeles; Dvir Gallery, Tel Aviv; Kunstahalle Luzern, Switzerland; Bolsky Gallery, Otis College of Art and Design, Los Angeles; Maison Européenne de la Photographie, Paris; the 11th International Architecture Exhibition at the Venice Biennale; Kunstmuseen Krefeld, Haus Lange, Krefeld, Germany; Israel Museum). Toister's writing has been published in various catalogues and journals (including Philosophy of

Photography; CITAR; Mafté'akh Lexical Review; Ubiquity; Photographies). Toister's book *Photography from the Turin Shroud to the Turing Machine* has recently been published in by Intellect/University of Chicago Press.

TOMOYA, MATSUURA

Tomoya Matsuura (Fukuoka, Japan) is a sound artist who builds systems that describe and generate sound. These take the form of music, sound installations, and instruments.

VILCA, CECILIA

Transartist chola, feminist techno-witch and language activist. Digital Arts Master's Degree, Universitat Pompeu Fabra, Barcelona, Spain. Founding member of the creative and digital heritage division, MyAP - Microscopía Electrónica y Aplicaciones en el Perú. Her artistic work is made with technology in concept and realization exploring its relationship with gender, society, and nature. From a decolonizing vision it develops in the borders of art and science, connecting ancient technologies with the new ones. Her main goal and poetic are to encourage reflection through revelation using technology. Six Art Residency Programs: Mexico, Bolivia, and Brazil. Independent International Program Committee of ISEA2020 Member. Journal of Science and Technology of the Arts Reviewer. She has exhibited her work, organized exhibitions, and given lectures in Peru, Mexico, Bolivia, Argentina, Spain, Cuba, Chile, Norway, Colombia, Brazil, South Africa, Australia, Greece, Ireland, Portugal, Austria, and the USA. Born, lives and dreams in / from Lima, Peru.

VOGT, ERIK M.

Erik M. Vogt is Gwendolyn Miles Smith Professor for Philosophy at Trinity College (USA). His research focus is on French, German, and Italian continental thought. He is the author and (co-)editor of 23 books and translator of over 20 books. His most recent publications include books

on aesthetic-political readings of Richard Wagner; on Theodor W. Adorno and the concept of genocide; on philosophical interrogations of Europe; on the aesthetic and political thought of Mario Perniola and Jacques Rancière; on Jacques Rancière and the question of literature. He is currently working on a text about Peter Handke, as well as preparing a volume on Žižek and the arts.

WILLET, JENNIFER

Jennifer Willet is a Canada Research Chair in Art, Science, and Ecology and an Associate Professor in the School of Creative Arts at the University of Windsor (Canada.) Willet is Director of INCUBATOR Lab an art/science research laboratory and studio in downtown Windsor. She is an internationally successful artist and curator in the emerging field of bioart. Her work resides at the intersection of art and science, and explores notions of representation, the body, ecologies, and interspecies interrelations in the biotechnological field. www.incubatorartlab.com

WOLLNIK, GUDRUN

Gudrun Wollnik studied German and English at the Universities of Amherst/MA and Mannheim. She works as a translator, copy-editor and technical writer in Berlin.

YAN, ZIWEI

Ziwei Yan is a PhD candidate in the English Department at Simon Fraser University, Vancouver, Canada. Ziwei's areas of study are Psychoanalysis, Posthumanism, Theories of Consciousness, Art Theory. Ziwei's current research project centers are: the impact of science on researchers' conception of desire, subjectivity and consciousness since 1818.

YURKOVA, KSENIA

Ksenia Yurkova (1984) is an artist, curator and researcher, living between Russia and Austria. She considers her leading artistic media to be text, photography,

video and installation. Yurkova started her practice as a researcher in the field of political theory and communication theory. The main focus of her interest for a long time was communication and language: the varieties of its substance, the possibility of conversion, its mythological aspect, stereotyping (the question of personal and political self-identification and identification by others), problems of memory, attitudes, and reliance. Lately, the artist is researching the phenomenon of affect in its autonomous bodily emanation; in its personal and political registers. She focuses upon how a stage of individual perception, to which one can relate memory, traumatic recollection and problems of identity construction, transforms itself into affects of the political body.

ZARETSKY, ADAM

Adam Zaretsky, Ph.D. teaches video, performance, video compositing, new media, art and technology, web/interactivity, digital audio, digital imaging, and contemporary theory. A former researcher at the MIT department of biology, for the past decade Zaretsky has been teaching an experimental bioart class called *VivoArts* at: San Francisco State University (SFSU), SymbioticA (UWA), Rensselaer Polytechnic Institute (RPI), University of Leiden's The Arts and Genomic Centre (TAGC), and with the Waag Society. His art practice focuses on an array of legal, ethical, social and libidinal implications of biotechnological materials and methods with a focus on transgenic humans. Zaretsky stages lively, hands-on bioart production labs.

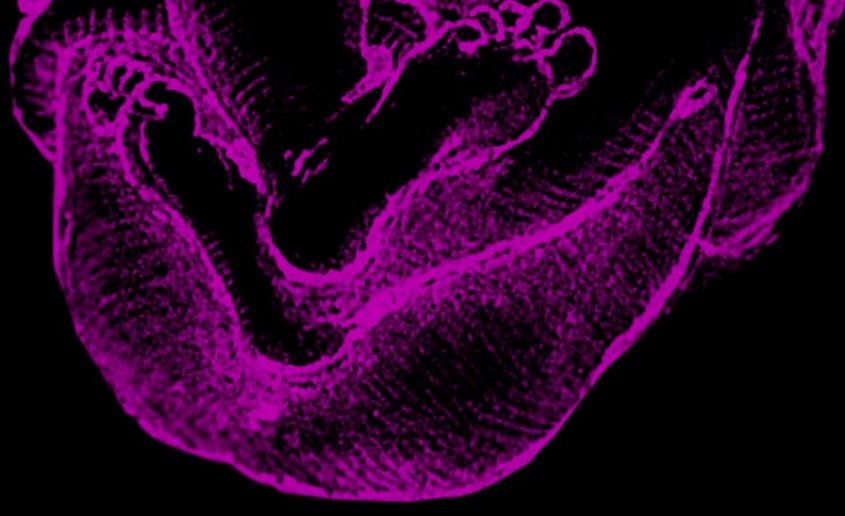
ZEPKA, ERIK

Erik Hoff Zepka (erik rzepka, ek rzepka, xoxoxcom, xoxox, Xenia Common) is a conceptual media artist, curator, poet, scientist, educator and theorist who critically explores the practice and consequences of science and technology. His art engages with the cultural products of technoscience and rethinks them in

terms of exhibition and display. The work has been showcased at HUMlab, ISEA (Scotland and Canada), Nabi Museum, The Tate Modern, Coaxial Arts (LA), Bronx ArtSpace, The Western Front, Pikselfest, SPAMM Cupcake (Paris/New York), The Whitney Museum, Videographe, and Interactive Futures. He's collaborated with groups including The Avatar Orchestra Metaverse, R3//1X//0RX in addition to artists such as Pauline Oliveiros and Stelarc. Website: <http://xoxlabs.com/>

ŻYNIOWICZ, KAROLINA

Karolina Żyniewicz is an artist (2009 graduated from the Academy of Fine Arts in Łódź, Department of Visual Arts) and researcher, PhD student (Nature-Culture Transdisciplinary PhD Program at Artes Liberales Faculty, University of Warsaw). Working in a laboratory (mostly at the Institute of Genetics and Biotechnology, Faculty of Biology, University of Warsaw) locates her works in the field of bio art, although she tries to avoid using this term. She sees her liminal activity as situated knowledge production. She is mostly focused on life in its broad understanding (its biological and cultural meaning). Her projects have mostly conceptual, critical character. The main point of her PhD research interest are multilevel relations emerging during realization of liminal projects. She tries to put her observations, as an artist/researcher (liminal being), in the context of Science and Technology Studies (STS) Actor-Network Theory by Bruno Latour and feminist humanities.



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