

DYSFUNCTION

Critics, ethics and challenges in Art-Based Research dissemination

Trans-Generatives 2030

aims at crossing disciplines for generating new ways of thinking and knowing. More than a one-time event (March 14 to April 2nd, 2022), it is a platform for interdisciplinary dialog between trans-generative people, rooted in the universality of human nature and diversity of practices. We value the pluralism of what it means to be a trans-generative person. We celebrate and defend the right to time in the collective life of our communities. For us this is the beginning of a new era and a new conversation. This conversation is necessary to successfully face the grand challenges of the Anthropocene.

From the trans-generative perspective, the Sustainable Development Goals are not meant to define our fate, but are rather a framework for evaluating our present conditions. The clash of nature and technology leading to the collapsing biosphere, puts our collective existence on this planet into jeopardy. A trans-generative perspective on the future is not merely an ideological tool of those who are already here. Instead it provides a secure ground to develop options and opportunity to shape a different kind of future together. This discourse has long been dormant in civil society. It should now become an essential point of reference, bringing together diverse struggles and, hopefully, becoming a way of explaining to future generations what we are about collectively.

Our planet's environmental crisis has also brought the issue of sustainability into public debate. We are concerned about how to rebuild our communities so that we live and act in ways that benefit our lives as well as our environment. We seek an alternative to the suicidal struggle of nature against humanity. The climate crisis is a crisis of our culture. A trans-generative perspective on climate change opens the way to a new and different kind of life for humans, nature and technology. After all, we are still a long way from integrating the insights of art and nature, as they relate to developing a successful philosophical approach to science.

Public participation is the seed of organizational life, and without it democracy does not exist. We propose to develop participatory organizations as an alternative to hierarchical ones in which voices are silenced by partisan agendas and the exclusion of those who are 'not with us.' We believe in a democracy that recognizes everyone's right to equal opportunity, irrespective of gender, age, race, sexual orientation, religious affiliation or place of origin. We aim to promote inclusion, not as a compromise, but as the best way of ensuring equal opportunities for all and a productive and reasonable debate in

the public sphere. A trans-generative vision would stimulate debate that combines public participation and inclusion. We aim to change the way citizens participate in organizations in order to make economics more responsive to the needs and aspirations of the people.

In this perspective, art and the imaginary are not disconnected or opposed to sciences and rationality. Indeed, it is necessary that the insights of art and aesthetics be combined with the hypotheses and findings of scientific research. The arts and creative fields are, and have long been, enriched with scientific ideas as well as the reverse. We accept that poetry may have no direct interest in the divisions of molecules, nor chemists have interest in poems that describe the properties of molecules. However, there is no reason why science and art should remain separated. We have come a long way from the naturalistic view that places art and science on separate planes, and regards them as opposites. The view of art and science as opposites was a product of the Western tradition that viewed a harmonious division of natural science and art as the polar opposite of one another. The Age of Enlightenment had a particular interest in regarding art and science as opposites. This culminated in the influential two-volume *Systema Naturae* published by Carl Linnaeus in 1735. Classifying nature into categories was an important step towards objective knowledge while artistic descriptions were reduced to illustrations. It was the beginning of mastering nature and using its resources: animals, vegetal, chemicals, minerals, for the benefits of humans and calling it "progress." Knowledge separated from aesthetics and ethics led to break the equilibrium between humans and the nature.

Re-creating holistic knowledge based on symbolic and analytical meaning, on non-human and human perceptions, on explicability and mystery, should not be seen as a return to pre-enlightenment obscurantism and religiosity. On the contrary, it is the path towards an integrated holistic view of the world, where accumulated knowledge is not oriented towards its own increase as capital, but towards enriching human understanding with other species perspectives. The call to art and the imaginary from within rational organizing is a way to conceive of human societies and activities as re-connected to the environment in a deep sense. Sensing plants and soil, thinking like meteorites, perceiving the invisible, learning from rivers and forests, is complementary to living in flows of digits, creating augmented beings or cooperating with thinking machines. Myths now become what they are: models of existence opened to alien lives and non-human time. This is why we need to intersect the mythical and the imaginary with the rational

and scientific. Reconsidering organizational themes like inclusive cooperation, systemic integration, non-destructive adaptation, non-quantitative value creation, extended accountability, wellbeing and social responsibility, individual and collective resilience, in light of the integration of natural and social sciences with art and human sciences, is a path towards more sustainable human organizing oriented to re-balance humanity and Earth.

The present publication hosted by *DYSFUNCTION* journal gathers most of the contributions to the online and on-site 2022 event Trans-Generatives2030. It completes the ArtemOCC 2022 proceedings publication. Both events are organized by ICN, the UNESCO Chair "Art and Science for implementing the SDGs" and the University of Lorraine CEREFIGE research laboratory.

This text has been generated collaboratively by Philippe's and Paul's human minds and the machine-learning artificial intelligence InferKit, after suggestion by Vittoria Daiello and Jordan Tate during their contribution on Open-Source Discourse (see page 15).

The articles cover many dimensions of collaboration between art and science. The construction of a common language needs lexicons and definitions (**Literary Language, Accumulated from Research References**, Chris WILMOTT. Read p. 2), either for re-defining terms, or creating new concepts and dialogue at the multiple intersections between art and science (**Dialogarchitecture for a Sustainable Future**, Hans-Juergen FRANK. Read p. 23). Christine Lacquet, artist, investigates our relation to the world according to three categories: bio, geo, exo (**Investigating Aesthetics, a Lexicon**, Christine LAQUET. Read p. 7). Wilmott dares to investigate with lightness the distinction art-culture (**Culture: Making and Consuming Art**, Chris WILMOTT. Read p. 2). He and Fred propose to complete scientific thinking with artistic "thoughting" (**The Fish Project, Augmented**, Chris WILMOTT & Robert FRED. Read p. 10), a proposal which tackles what "different thinking" could mean in practice. Such reflections help theorizing what is at stake in the integration of imaginary and rationalities, and there is a lot at stake: Trans-Generatives 2030 demonstrate how many varying ways of intersecting art and sciences already exist in fields and practices. Theatre allows for bringing to the fore difficult issues in organization practices (**Gentillesse au travail et impostures**, Steve ORDENER, Sybille PERSSON, Hacem BOURNINE, Nadia BROCHOT. Lire p. 18). **Violence organisationnelle : Retour sur une performance théâtrale pour faire ressentir, exprimer et comprendre**, Yves HABRAN,

Régis MARTINEAU & Andréa FERRERO, Lorna GIRARD & Lohan ACCOGLI. Lire p. 8).

Literary quality can improve scientific writing (**Playful Perspectives: a Creative Writing Workshop for Researchers**, Renée ZACHARIOU. Read p. 3; **How to Write a Successful Scientific or Commercial Proposal Using Science-Fiction Techniques**, Jean-Claude DUNYACH. Read p.20) and shape them into narratives (**Petites libertés sous contrôle**, Kitty STEWARD. Lire p. 21). Poetry deconstructs institutional coercive texts in light, efficient and poly-meaning ways (**I See Poetry Everywhere: Creative Protocol**, Steven T. LICARDI. Read p. 9). Walking and parading are means to empower people towards SDGs (**Walking as Enacting Trans-Generatively! Experimental "Psycho-social-geological" Time-walk in Nancy**, Notes on and Observations about experiencing deep time during walkshop, Wendelin KÜPERS. Read p. 14). **Parading through a Circular Area Development with Arts and Sciences**, Amanda BRANDELLERO, Ellen LOOTS, Judith SCHUELER, Evelien VAN DEN BRINK, Emma DIJKHUIZEN, Jet SCHAAP ENTERMAN, Irmgard BOMERS, Marleen BUIZER, Ulrike HAHN, Josué AMADOR VALDEZ. Read p. 13).

The central part of this issue develops the critical effect of trans-generative approaches. Arts in their aesthetic dimension can be a powerful vector for action and thinking, and we have gathered varied examples of using art and aesthetic to reveal, relate, enhance, capture, and criticize. Visual analysis deconstructs bank greenwashing (**L'Art de l'éco-blanchiment : Les Couleurs verte et bleue dans le langage visuel des banques**, Francesc RELANO. Lire p. 12), and shows how it is made in such an obvious way that it becomes obscene. The audio-visual composition *Eyes on the eARTH*, inspired by the NASA's GRACE project, which monitors our planet's vital signs, represents our planet uncertain future and challenges in an aesthetic and disruptive way (**Eyes on the eARTH**, Ieva KLINGENBERGA with Krista BRICE, Simona SOCCORSI & David BACCI, Nasser EL GILANI, Paola GANDIN. Read p. 16). Collectively copying great art allows to reflect on cooperation processes and competences (**Leading for Sustainability in a Fractured Knowledge World: Inquiring into Representational and Collective Aspects through an Online Arts-based Intervention**, Kristina KURAPKAITYTE & Svenja TAMS. Read p. 6). Several contributions

investigate how to build multi-voiced art-based dialogue across disciplines. Music and song translate research on exclusion and inequalities into moments of solidarity (**Creating New Dialogues and Solidarity in the Face of Inequalities: A Music Performance and Workshop**, Gregory JACKSON, Svenja TAMS. Read p. 17). The hot topic of AI applied to discourse production is tackled through the construction of an AI-assisted, arts-based, collaborative discourse platform (**Open-Source Discourse in Practice**, Vittoria DAIELLO, Jordan TATE. Read p. 15).

Trans-generative thinking and practice requires creating networks of researchers, artists and scientists. Core contributions open the doors to such networks (**Ground Works / Vibrant Ecologies of Research**, Dr. Aaron KNOCHEL. Read p. 8; **Sustaining and Expanding Networks of Artist/Researchers, Roundtable**. Read p. 2). More than just providing a list of examples, there is a need for educating to trans-generative practices. Teaching and leading for sustainability can be better done with art, and produces amazing results, in such different field as food for the future (**School Lunch 2050**, Maximilian SPIEGELBERG, Steve Mc GREEVY, Read p. 12) or eco-social pedagogy for the youngest (**Arts-based Eco-social Pedagogy in Educational Settings: how to Help Future Generations Shape a Better World?**, Taina De CARVALHO. Read p. 11).

The shining stones in our mining appear in the pages written by artists who devote their whole thinking, work and discourse together to ecosophical perspective, teaching us how to talk to trees, how plants move (**To plant Yourself and Listen to the Soil**, Karine BONNEVAL. Read p. 4), how to listen to a meteorite or inviting us to look at earth with our heart. As a follow-up proposal, we invite readers to react and contribute to the Trans-Generatives2030 provisional program outlined by Chris Wilmot and Robert Fred (see p. 10-11).

The whole in its kaleidoscopic glittering form is an invitation to dream, imagine, create and research on trans-generative actions and thoughts for shaping better futures.

Philippe Mairesse
Paul Shrivastava



Literary Language

Accumulated from Research References

Chris WILMOTT

Art diversity: [Noun]. Something that cannot be evaluated with strict science measurements.

Art limits: [Noun]. There are no limits on what can be art, only questions on what is.

Art: [Noun]. An object, a thing, an event, a happening, etc. [Noun]. Branches of creative activity. Sculpture to painting, poetry, acting, theatre, comedy etc. [Noun]. A skill. [Noun]. Composition, production, form, misrepresentation, school, business, strategem, ornamental, surreal, etc. [Noun]. An ingredient for social life. [Noun]. Something that brings forth that which is original and unanticipated. [Noun]. Something that transcends cultural differences. [Verb]. The expression or application of creative skill. [Verb]. What goes on in people's heads. Art is not eclectic. Art goes on in the heads of humanity. Art has qualities of unpredictability, uncertainty, ambiguity, non-linearity and so on, that mirror the goings on, in people's minds.

Big Data: [Noun]. A construction of science. [Noun]. Something enabled by the tools of Art.

Citizens: [Noun]. The rest of humanity.

Climate psychology: [Noun]. The development of human psychology will continue to evolve such that we will struggle in the future to comprehend the mentality of those who lived back at the dawn of the third millennium. The challenge of comprehending the mentality of today, relative to the past with its poles of affirmation and denial of climate as an issue, will continue. How may we look back, one day, at today and seek to understand the cultural change that should have happened but did not? And understand temporality?

Collaboration equality: [Noun]. Where there is no need for an artist to understand the complexities of science to produce art. Nor do scientists need to understand art. In collaboration they advance separately.

Common sense: [Noun]. That to which climate science appeals in art, presented to people, professional people, citizens, and humanity in visual ways that are readily understood in sustainability.

Counter-intuition: [Noun]. Contrary to intuition or common-sense. A dynamic in climate and sustainable development communication. Operating in the minds of people, professional people, citizens, and humanity. Flowing across these counterintuitive knowledge, that spans these intuitively different assumptions and models, uncertainty is the result. Uncertainty is a type of counter-intuition.

Empower: [Verb]. Consequence of art acting on humanity, citizens, professional people, people, and fish.

Fish: [Noun]. The 3.7 trillion ordinary inhabitants of the sea.

Intuition: [Noun]. A dynamic in climate and sustainable development communication. Operating in the minds of people, professional people, citizens, and humanity.

Objectivity: [Noun]. A quality of science.

Ordinary People: [Noun]. The 1 billion people at risk of coastal hazards including flooding, according to the IPCC. Rich, poor, able, disabled, deaf, blind, privileged, disadvantaged, non-gender specific.

People: [Noun]. Non-professional role (personal life) in society of professional

people, ordinary people and citizens. Mother, father, parent, child, etc.

Perception: [Noun]. What artists see and what scientists know.

Professional People: [Noun]. Defines a role in society. Teacher, artist, scientist, politician, architect, fisherman, fisherwoman, chief executive, etc.

Psychology: [Noun]. Something that cannot be separate from culture.

Reality: [Noun]. What goes on in people's heads and the heads of fish.

Span: [Noun]. The possible story lines for the future, and the lack of data about this are so wide.

Subjectivity: [Noun]. A quality of art.

Sustainable Development: [Noun]. A particular goal directed at people, citizens, and fish.

Thinking: [Noun]. What goes on in a scientist's head. Not necessarily the same as thoughting.

Thoughting: [Noun]. What goes on in an artist's head. Not necessarily the same as thinking.

Time: [Verb]. What goes on in people's heads and the heads of fish.

Truth: [Noun]. The stance of an individual scientist or artist based on their personal perspectives, upbringing, socialization, and so forth. A way of thinking.

Viewers: [Noun]. People, ordinary people, professional people, and citizens who receive whatever message an artwork transmits, expanding on message receipt viewer capacities, opening up change, to reflect a new way of thinking, about climate and sustainability.

Culture: Making and Consuming Art

Chris WILMOTT

According to Mark Sheeky: who observes art has two lives. The Making. The Social. Could UNESCO-ICN chair and Trans-Generatives adopt and adapt this distinction? Thus, very broadly: "Making" time is when one or a few people (labelled artist, scientist or whatever) employ their culture to create art (whatever that is). The Social life of art is when that art is consumed by the many, creating culture.

The "culture/s" that inhabit one or a few makers, are used by them to create art. Art when socialised to the many, inhabits culture/s. Making is separate from Consuming, in function, dynamics, agency, time and other dimensions. For the phrase "culture/s" can be substituted other words, to qualify culture types: digital culture, visual culture, performance culture, heritage culture, sustainability culture, Brexit culture, etc. Ethics is part of culture. The role of culture is to [Create and Make] and to [consume and socialise]. Art is a bridging vehicle in this role. The "culture/s" on either side of this bridge are not necessarily the same.

With this vehicle, there are as many threads and intersections acting, as there are types of culture and different people acting. Whilst the culture of Makers may be known to them, Makers never know which cultures will be met by their art creation. At this meeting point many threads and intersections tangle with each other, interconnecting Making and Social. Whatever culture is, or whatever culture it is that interconnects through art, culture is embodied, present, and

animate in individual people, Maker or Consumer. Untold culture differences between people are illuminated by the vehicle of art. The reference point of culture is the individual person.

Separating the Making life of art from the Social life of art allows that makers need not be physically present, exercising agency, or even alive, when art is consumed. This allows the agency involved in Making, to be separate and different from, the agency involved in Social consumption, when the audience is always present and alive.

However.

There are implications in this separation of Making and Social; for live performance art, when makers and consumers are by definition physically present at the same time; for the reproduction / transmission of performance art in video, audio (or whatever), when performers are not actually physically present with the audience. These implications need more thought, maintaining however a distinction between Making and Social. Other thought needed includes the definition of what boundaries - physical or mental - are present, which are dissolved or dissolvable, how, why, where and when, in Making and Social.

Is the Social phase when civil structures are best built, by the many not the few? Does the Making phase best build civil structures of Makers for the one, or few? Are Maker and Social phases sequential for art such as painting or sculpture, but for performance / interactive art they are almost but not quite parallel? What is social art in Making and Social stages? Would UNESCO best engage with culture, by starting with the audience of the many and then working backwards, from the Social many to the Making one or a few? When does culture that creates "change for many, not a few" best happen because of the vehicle of art? Video essay, random generation of poems, critical visitor, and Ethnographic Art begin in the Making time of one or a few people. Becoming Social when other people consume that art. Theories of change and urban regeneration are consumed in Social time. Are these theories made in Making time?

The Social life of art is when art makes most, not a few, people happy.

But.

What is meant by the word "culture?" As mentioned earlier, the consumption of art creates culture, but how is that culture created in an audience? And in the above, culture is said to inhabit art makers, but how is that inhabitation of "culture" achieved. What does "culture" mean?

According to some, "culture" as a word is "an empty vessel, waiting for people to fill it." Borrowing this notion leads to one explanation of how culture is created, in and inhabits people. People each have their own personal culture made by their empty vessel filling. Whether that person is an artist Maker, or a social consumer of art. Culture is whatever, within some constraints, a person chooses to use, to fill that empty vessel.

Classifying the content of culture as digital, visual or whatever, as in the above is not enough to explain with what empty vessels are filled; instead, the content of the culture vessel comes from how people choose to fill it with, at least, knowledge, beliefs, and values. And the interplay thereof.

There are multitudes of people in the world so there are many diverse personal cultures, based on different knowledge, beliefs, and values, at least. Diversity is valued in art. However, the diversity of different personal cultures that face Trans-Generatives, that face climate change, is as wide as the population of the earth. Which sets the Trans-Generatives global mission into a particular context.

Furthermore, the definition of the term culture shifts in meaning over time, to be contested in sharp debate.^{1,2} So in a Trans-Generatives context, not only is culture an empty vessel waiting for people to fill it – with knowledge, beliefs, and values as a start, but over time people change these aspects of how the vessel is filled, or refilled. Culture is continually redefined. By individual people. And sharp debate ensues, to match perhaps the tensions set up by separating the Making and Consuming lifetimes of art.

The culture created in an audience member, by art, is that collection of knowledge, beliefs, and values which that person chooses from the art. The culture inhabiting an artist is similarly chosen by the artist. Both choices used to fill, or refill, the empty vessel.

Perhaps Trans-Generatives considers itself an agency for assisting people to fill their empty vessels, or to empty their already filled vessel and replace its content with something else. The redefinition of personal culture being a continuous process. For instance, with what filled vessel of knowledge, beliefs, and values do artist, business, student, academic, economist, and other people arrive

¹ Baldwin et al. 2006. "Redefining Culture; Perspectives Across Disciplines." London: Routledge. p.4.

² Rosaldo in Baldwin et al. 2006. "Redefining Culture; Perspectives Across Disciplines." London: Routledge. p.ix - xi.

with, at Trans-Generatives 2030? How does exposure to TG2030 change that vessel, over time? How does that change allow these people to coalesce into new groups? Assuming that such new groups are required in the Trans-Generatives new pursuit of culture, in some way that is different to approaches used in the past, which perhaps have not worked fast enough to change cultural mindsets about sustainability or climate; and that art in its Making and Social life contributes to the filling of empty vessels.

Sustaining and Expanding Networks of Artist/Researchers

Roundtable participants: Scott SIKKEMA, Mark DIAZ & Teju ADESIDA, Kylie PEPLER & Maggie DAHN, Erin PRESTON

The presentation stems from examples by Chicago Arts Partnerships in Education (CAPE) classrooms and how they investigate community-centered arts practices, extending time and learning spaces, building networks of art, teaching and research practitioners via professional development, sustaining and articulating networks through co-curation and exhibition.



Along with the tragic loss of life and harsh illumination of socio-economic inequities, the pandemic revealed the educational bankruptcy of uniform and linear curriculum, top-down professional development, compliance-based frameworks for teaching, and heavily centralized decision-making bureaucracies in school districts across the United States. If this is what we learned did not work during the pandemic, how do we articulate and describe what did work? For Chicago Arts Partnerships in Education (CAPE), the pandemic revealed the sustainability of a network-based, collaborative, and arts integrated educational model. As schools return to in-person learning, so too will the traditional power hierarchies that existed prior to the pandemic. However, there is an opportunity in this moment to reimagine the space of schooling, to disrupt compliance-based, outcomes-obsessed models of education to center pedagogy and research on student interest, inquiry, and locally relevant content.

The workshop is an action-inspired response to UN Development Goal 4: Ensure inclusive and quality education and promote lifelong learning for all (UN agenda 2030) through a collaborative reimagination of learning models.

CAPE is a U.S.-based non-profit organization that partners artists of all disciplines with kindergarten through twelfth grade public school classroom teachers, who together co-plan and co-lead arts integrated collaborative curricular projects with students from low-income schools in Chicago and in suburban districts. Through partnerships with university-based researchers, CAPE staff, teachers and teaching artists have documented, analyzed and further developed practices that contribute to a sustainable and evolving network of Artist/Researchers.

By self-identifying as Artist/Researchers and by viewing their students as Artist/Researchers, CAPE staff, teachers, and teaching artists create a disruptive and radical space of learning within the American public school system that pushes against a traditional "banking model" (Freire, 1970) of education. This pedagogy allows teachers to work with practicing artists to reimagine their classroom curriculum through creative arts practice, to use the arts to create access points for students struggling with academics to engage in the subject matter, and to develop emergent curriculum by collaboratively investigating academic content areas through interdisciplinary arts practice.

Through these examples, the CAPE presentation team demonstrates the ways in which each component has sustained and evolved prior to and during the pandemic. Leading from the examples we highlight, the group engages conference attendees in a participatory session in which individuals are called to collectively reimagine educational and collaborative spaces in their own communities, municipalities, or countries.

What does a CAPE teacher-artist team do?



Student-made installation piece, George Washington High School, 2020

- Co-create Big Ideas
- Co-create Inquiry Questions
- Co-plan projects
- Co-teach
- Co-document
- Co-reflect
- Re-frame constructs
- Publicly share work
- Co-attend ongoing professional development
- Commit to being part of a network

Highlights. Sustainable practices and subsequent questions

Transdisciplinary, contemporary arts practices/artist partners.

CAPE artists work on projects and collaborate with schools via aesthetic approaches that are conceptual and process focused, emphasizing strategies and experimentation in questioning, social engagement, and meaning making across mediums.

*How can transdisciplinary contemporary arts practices provide a lens for practices in your locality?

Research at the heart of pedagogy and art making.

CAPE teachers, artists, and students begin and end with inquiry. Inquiry questions drive all CAPE curricular unfolding and art making. Curriculum and art making are seen as investigative, springing from questions as they evolve. Importantly, research is seen as a practice that is also connected to identity, as CAPE teachers, artists, students, and program staff are self-identified and perceived as Artist/Researchers.

*How can the intersection of art and research provide a sustainable, non-hierarchical space of learning?

The network, from individual to collective.

Beginning in the 2000s, CAPE program staff restructured the organization. Teachers, artists, and schools that are new to CAPE go through a two-year process of professional development and classroom experimental collaborations. After this process, individual teams are eligible to submit a proposal to continue on as part of CAPE's long-term network of teacher/artist teams. This structure both solidifies the partnership of the individual teacher and artist team, and, if they propose, provides an ownership and a commitment to the idea and the reality of being a member of a dialogical, mutually supportive network across schools. In addition, members and program staff understand the network as long-term, and function and envision accordingly.

*How do you build and grow your sustainable network of practitioners?

Evolving professional development.

Part of being in a CAPE network of Artist/Researchers is engaging in professional development sessions which are not static, top-down, or purely information dispensing.

CAPE professional development is inquiry-based, exploratory, rooted in contemporary art, generativity ambiguous, and allows for multiple points of entry, voice, and leadership.

*How can you design professional development or workshops to support inquiry based practices?

programming in 2004, with the approach that in-school educators could partner after-school with CAPE artists to collaborate with students. CAPE's after-school work extended the temporal understanding and impact of CAPE's work, as well as spatial, and this was extended further in 2010, when CAPE began programming for parents co-taught by CAPE artists and parent coordinators at the schools. This work has allowed us to rethink school learning spaces, extending the classroom out into the communities.

*How can you extend time and space for sustainable community engagement?

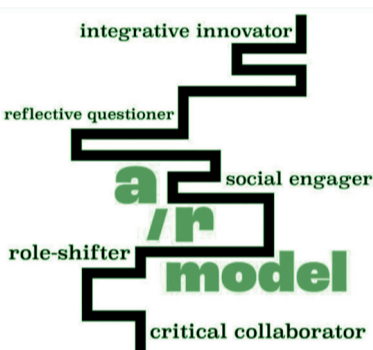
Public sharing and collaborative curation.

CAPE teachers, artists, and students debate public sharing strategies, social engagement, and audience response as part of their creating process and final products.

Additionally, CAPE teachers, artists, and students are part of ongoing collective processes of exhibition and event curation that capture their questions and beliefs as a network to transmit to audiences.

*How can curation and exhibition further your efforts to build sustainable communities of practice?

The artist-researcher model:



Openness, what it means to me as far as teaching goes is literally **just being open to anything happening**. I think **listening and observing** are two big factors that play a role in openness, especially when it comes to teaching art or anything of a matter **observing the students** in your class, seeing who is keeping up who isn't, **engaging in conversations** And just kind of **getting constant feedback**. I ask a lot of questions. I make sure that the **students are like a part of building the curriculum**. They don't know that, but that's exactly what they're doing by me asking them, do you understand? How do you feel about this? Do you like what you're doing, if not, what is that about? Like how do we engage **constant conversation and it always is ongoing**. There's no right or wrong in it. Um, So I think that's kind of how I approach openness.

-Shenequa

Post-presentation conversation

Maryam: How can art be rethought in consideration of CAPE's practice?

Scott: CAPE's partnerships are not just to impact the teacher and students, but also the artist, their practice and their construct of what art is. True co-authorship and students as primary authors challenges definitions of art, including for social arts practice artists. It is CAPE's hope to connect more with the artistic research field (which seems more prevalent and established in Europe) and contemporary arts theory forums, as was suggested by Maryam.

Paul and Philippe: How could CAPE's practice, and arts-based teaching, impact higher education?

Scott: The Artist/Researcher model could become university-based. Nevertheless, CAPE has found local universities tricky to navigate and often resistant. One possibility might be more external, zoom-based relationships.

worked on was, what to expect? What are the benefits? What is produced? Some of the benefits, or what was identified as being produced, included trust and openness of mind.

Scott: This brings to our mind both some of our research, and also the CAPE Artist/Researcher model. The model is about becoming, but this is related. The products Philippe shared from the project he discussed are striking, and we'd like to continue to learn about this work.

Philippe : Can CAPE's work go beyond being a counterpoint in a public school system or public education?

Scott: This is also a good debate to continue...

Post-presentation email conversation

March 17, Maryam: Your work has great potential for scalability and for fostering theoretical innovation in both the artistic and the educational fields and the artistic research scholarship in between. I found your shift to the digital environment AND your curatorial take on artistic-research education particularly potent in this respect.

March 18, Paul Shrivastava: It is highly thought provoking and lifted my spirits to see this deep integration of arts in teaching and building network of artists and teachers. I will continue to think about the issues raised in the session and in this email chain, particularly of scaling to more programs and schools, and scaling to university education, and to public education. CAPE has done excellent work on codifying inquiry and curation processes, honing the teaching and learning environments, training of participants.

March 19, Maryam Rashidi: Scott, when you speak about "scale" in terms of "theory change," I would link it with Paul's comments in his email to say that the theory would need to aim not only for extending scope ("more") but also, and importantly, for consilience ("more diversity"): the new theory would have to explain more diverse artistic, educational and artistic-research practices in more diverse contexts. I think the potential for scope and consilience is inherent to the model you showed you have developed (the graph you showed) for creating networks of artists-researcher-teacher and the inquiry process. The trick could be to test your methodology in different contexts (and in any case both online and in-person) in order to create the evidence and to map how it translates in different teaching contexts and with what impact within each and across (I believe Philippe's comments pointed also to this direction).

Playful Perspectives: a Creative Writing Workshop for Researchers

The following fictional texts were written during a Trans-Generatives 2030 workshop by Renée ZACHARIOU, that took place on Tuesday 22/03/22. This workshop was part of the #OWEESF project in partnership with the CEREFIGE, management research lab of Université de Lorraine, the Research Group on Collaborative Spaces (RGCS) and with Les Imaginales, a speculative fiction festival held yearly in Epinal.

"Writing is serious business if you write about important topics."

That's true. But what if infusing a sense of freedom and creativity in writing was both a way to generate new ideas and get the message across more effectively?

During this workshop, we will use freewriting, a method that consists in writing quickly, without editing (or censoring) in response to a prompt. The goal will not be to produce the "perfect" text (it doesn't exist, anyway) but to get our creative juices flowing, and in doing so, uncover different points of view. We will write using our five senses, channel the voice of things that usually don't speak, and turn logic on its head.

Through play, we'll try to challenge the way we think and the constraints we set on our writing. And maybe, after the workshop, you'll find yourself writing a bit differently about your research topic...

This workshop will be interactive, so make sure you will be in a quiet place where you can write and speak. You can have a notebook and some material you have already written (articles, essays, etc.) at hand, but that's optional.

If your research topic was: a perfume, a texture, a color, a sound, a taste what would be it? You can write down as many as you like

Hélène M: Chlick chlick chlik. This is the sound of my research.

Chlik chlik cklik. It could be the sound of someone taking a selfie with a phone in front of le Mont Blanc or any tourist place that, as several books said "you should visit before you die." One of the thousands pictures that this person will collect as "memorable experiences" but never watch again,

Chlik cik chlik. In my case it is the sound of the old red typing machine on which people, anonymous, write intimate letters addressed to this famous mountain, or to this unknown place or to this little flower trying to grow near the path, or even to the stinking cow poo which remind you of your grand ma farm.

Chlik chlik chlik

Zeynep B: The art and science of understanding... Sight, touch and sound. How we connect with our environment with the other than human. We see but are we seen? We hear but are we heard? We touch but are we felt? Is there a way of knowing? Two weeks ago my son planted several seeds in a pot. The seeds started growing... I did not hear them grow. But we saw them come out of the soil, change shape almost on a daily basis. Then I noticed that understanding/ feeling time is needs a combination of human sense mechanisms... then he started talking to the plant. I told him the plant can sense...He made fun of me but kept on talking to it even more so. Maybe it's not so ridiculous.

Günter S: Once upon a time everybody looked at me. Why?

Because I was running so quickly, that they were afraid to loose me. There were no more this specific perfume of my existence. And, they were afraid to lose the contact with me, as they were so accustomed to catch me, to touch me, to use me, to invest me. Things have become grey, sounds inaudible before of the too high frequency, as I am, indeed, so "speedy" now.

So they lost their appetite.

Jean-François S: My research is some sort of long electronic and distorted noise. You have to wait until the end of this stressful "signal" to do whatever you must do. Technology is a necessary burden to many, and I'm looking for ways to help people find happiness and relief despite the noise.



Write about research: Now write about your research... From the point of view of what you are researching.

Hélène X: I make no sound, I am as quiet as a long breathing, people do not see me right away, nor do they want to touch me or sense me but they do talk about me more and more often.

When they are young they praise me as I make them grow old, stronger, as I create more opportunity, more mobility, more life without naming me but they enjoy my simple presence.

When they feel old, they start to notice I have a perfume, a smell, a rhythm, a touch, and a life.

Zeynep B: I am a creative producer. It's a fair size team and we have performance and visual artists, botanical scientists and interface developers. We all are trying to build that bridge between us and the plant. We want to understand the change in the plant in a course of a day. It's a complex life form and how we holistically sense the change. Complexity cannot be attributed only to its life form, biological and chemical structure. But complexity also comes from our lack of embodied understanding. June is a plant scientist. She seems to know every conceivable detail on what a plant is. However she focuses on vascular plants. Vascular plants are those which have vascular tissues that distribute resources through the plant structure. Danny is a performance artist, his focus is on collective movement. Mars is an interface developer, he works on simulating and designing languages between entities. And myself. I am a linguist and a social scientist. Kerry is a new media artist.. she is trying to find her way around with working with biological material. So together we will try to develop a bridge, a pathway that will translate hearing, touching and moving between the plant and the human.

Jean-François S: The office opens and employees start pouring in. I hate this moment but I am prepared. I know that throughout the day, I will be insulted, hit, and shouted at a dozen times. I might even get unplugged with no fair warning. And here it starts already:

"Come on, not again. Slow and unreliable old crap! That thing won't even open my file."

"But I'm doing my best," I want to say. "I only have two gigabits of RAM."

I start to panic even though I shouldn't. It makes the problem even worse. I hate myself.

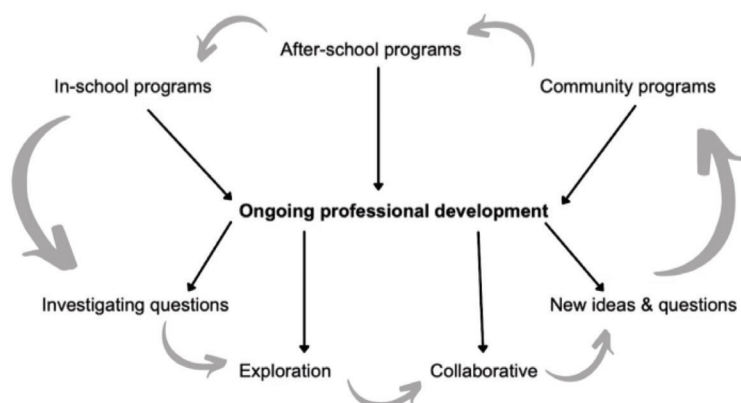
The middle-aged manager starts hitting my screen furiously.

I can't deal with this permanent anger anymore. I'm turning off, and will never turn back on again.

Hélène M: Ohhh come on. Stop looking at me like this! It's embarrassing...

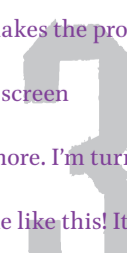
Can't you find someone else to watch? to bother? and no,

PROFESSIONAL DEVELOPMENT



Extending school space and time. CAPE began working in after-school

Philippe (discusses a project he has been working on and shares resources): A query me and my colleagues



stop, no pictures. I am fed up being on all these Instagram stories of people I don't know.

I was here, quiet, enjoying the first days of spring. Alone, with a warm sunshine after this long winter.

And then everybody is now all around me. I feel surrounded. Kids running, so excited. One even tried to launch a stone at me. Pfff. Where are the parents?

But? What is this? is this guy really taking off his shoes. Seriously? in march? and now he is coming to see me...

If only you could imagine my life...
Signed : the Lake

Chose the 3rd word from the 3rd page (if it's a pronoun chose the 4th). Everybody reads their word and I write them down. Write a text using all the words - it can be anything, a short story, a poem, ruminations...

Wolf, exhale, exterior, wisdom, sluggish, exterior, Jimmy, earth, hygiene

Günter S: Arriving at the exterior, Jimmy exhaled. The wolf had disappeared. The seniors, full of what they called "wisdom," had stipulated to kill the wolfs, because of their concern of hygiene, but for Jimmy the earth would become very sluggish without the wolfs.

Christine L: "What don't you understand?"

I took the time to stipulate every details regarding the wolf.

"He's back!" Jimmy said

"No way! Who on earth can believe that?"

There're all dead, exterminated by humans.

Inhale, be quiet, I thought. No panic.

Think about it: I'm now becoming a senior and I always thought wisdom will come with the age, like a good wine, pffffff

Exhale. I think about my yoga teacher, and I take another deep breath.

The practice of keeping yourself and your surroundings clean is called Hygiene. I should remember it.

Look at the exterior and imagine: If your wish is a slangish fish, then my fish would be a slangish wish.

Zeynep B: I don't believe this. What an earth-shattering idea that was. Coming from the lone wolf, Jimmy. He has been living a nomad life for so long.... So he has become the dirt, the soil which provided him the home he has been longing for. He came to our performance rehearsal today. You know that chaotic moment when everybody is trying to deliver something. A complete outsider, situated himself comfortably on the exterior platform opposite to the director's lodge. He moved sluggishly into a dirt pile and said 'stop will ya just for one moment. Silence has something to say' We all stopped, unsure of how the next line should be uttered. Jimmy's intervention was unnerving, disrupting in a way that was hard to explain. But I must say it was necessary.

Hélène X: I stipulate to the teacher that the wolf named by the kids "Jimmy" belong to this place we called earth garden. He is the senior of the pack, full of wisdom. Each time he is howling at the kids, they retain their exhalation, even the sluggish one could feel the strong vibration. It creates that inner experience of your body becoming a new space, a white room - hygienic from emotion or feeling, isolate from the exterior. It is an experience we all should live.

Hélène M: The article was incredible. But results were there. The validity was tested. It was in the most famous review. Nature. Impact factor maximum. Jimmy Chen, the author has a strong reputation. Three decades studying end of life, but not through hygiene scope but through resurrection.

The article stipulates : When dying, senior exhale their "wisdom." It's a short moment, few seconds only. But with the new technological tools we were now able to see this as a small

cloud and capture it! imagine the possibility for earth!

But people often die without notice, and all this wisdom was lost. Of course, few of them were still sluggish diers. But what about all the others? dying in exterior, letting their wisdom go.

To detect the very end of people's life, and be sure to capture their final wisdom, they were now breeding and training an animal with the strongest smell capacities : the wisdom wolf.

Jean-François S: I saw on the news that the peace treaty was signed by official both from Earth and from Mars.

Jimmy Dean, Senior Vice President of Earth, explains: The treaty stipulates that nature is not for anyone to take, whether on our respective planets or on any other. It also stipulates that technological advances will be shared among us from now on.

I am glad that people finally came to their senses and demonstrated wisdom after all these wars and catastrophes. It was a sluggish process that took almost three hundred years, but it completed.

I go outside and exhale the fresh air. Have I just seen a wolf quickly entering the forest? That cannot be ... There is only one left in the Vosges mountains. In a few years, once we won't be able to control any exterior space, I'm sure we will have plenty more.

Wendelin K: A wild, lonely, but socially capable wolf, who used to be very stipulating, named Jimmy, strolls landscapes on the earth. For some time he is in search of a pack of senior wolfs for learning and cocreating group wisdom, again. For continuing his journey he is having a break which allows him to do some exercises in particular exhaling into the exterior (holding the breath and mindfully inhaling, connecting to the interior) and but all this overcoming his sluggishness and create some "soul hygiene!"

Write the main argument of your research, only completely inverted. Elaborate on why that may be the case (in a crazy world, where logic is flipped on its head)

Jean-François S:

- Boss, I have a crazy idea to sabotage American companies. What if we made a new communication tool that will make everyone angry. There will be no interface, no icon, just an ugly white window in which you can type texts, perhaps attach a file or two or twenty. The communication will be so impoverished that conflicts will systematically arise, as people won't be able to interpret messages properly. At the same time, it will be super easy to send messages to everyone, so that the whole company can lose time, money and nerves.

- Vladimir, think again. It exists already since the 1970s. They invented it themselves. It's called e-mail.

Zeynep B: How can we conceptualize a shared ecology for collaboration between art science and technology? Unfortunately, this is a dead end and there is no logical way of claiming that there are common threads across these meta disciplines for establishing dialogue and work together. What appears to be collaboration are temporal engagements in distributed smaller scale tasks. We observe serious obstacles when it comes to collectively engaging with research and the creative process. Both are compartmentalized despite the ambition to share them. At best we can take them as boundary concepts and work our way towards compromise.

David W:

I am interested in changing individuals' mindsets and worldviews to feel a greater connection to the planet and to each other.

Turns into: To disconnect individuals from each other and the planet so as not to change their mindsets.

Individuals need to change their mindsets and expand their worldviews to feel a greater connect to the planet and to each other.

Turns into: Individuals need to disconnect themselves from each other and the planet so as to perpetuate their current mindsets and worldviews. We need to be more individualistic and narrow in our thinking so as to only care about ourselves in the short-term and to realize the true virtue of selfishness.

To Plant Yourself and Listen to the Soil

Karine BONNEVAL



Se planter. Sculpture, ceramics and plants in soil, 2019.

My artistic research attempts to experiment with common - possible or imagined - perceptions between humans and plants.

Furthermore, I will cross a selection of my works, the history of botanical sciences, the research of laboratories I collaborate with. I will sometimes evoke my personal background to give a touch of the paths my thoughts went up to now. Some examples to show what I propose to see / hear / smell / practice, in order to share moments of the plant life. My partners in laboratories work in plant

ecophysiology, pedology and bioacoustics, or air physics and fluid mechanics.

Plants seem far from us, with little in common. They have different perception organs from ours, a fine approach to the world around them, a complex interaction. How can we find connections with such different organisms? For almost fifteen years, I have tried to build what Baptiste Morizot calls "translators."

Even if my research is part of an "art and science" register, my range of forms and materials often comes from the handmade, the vernacular, the local territory. Thus *Se planter*: a ceramics sculpture in shape of gloves/roots, as an invitation to put one's fingers in the soil. *Se planter* is an expression in French meaning to fail, and there are other French expressions, referring to the plant world, with a negative meaning connected to immobility, lack of reaction: *se planter*, *végéter*, *prendre racine*.

But on the contrary, plants, in their own time, are in movement and in permanent adaptation.

Stefano Mancuso, professor at the University of Florence, Italy, and founder of the International Laboratory of Plant Neurobiology, said in *Le Temps* magazine, in 2018:

"Now, I'm going to be provocative in saying that plants are the only organisms that really solve their problems, because we animals think we solve our problems, but we usually use movement to avoid them: if it's cold, we go to a warmer place and vice versa; if there's a predator, we run away; if there's no more food, we leave. Plants face the same problems, but have to solve them without moving. They are therefore much more "intelligent" than animals!"



Anent, papier maché and soil sounded piece, 2018.

In this practicable piece you can hear a selection of traditional songs addressed to plants, coming from all over the tropical belt.

Achuar women treat plants as if they were their children. And Achuar hunters treat animals as if they were their brothers-in-law. Seeing the Achuar treat plants and animals as if they were human beings made a deep impression on me: what I first thought of as a belief system was in fact a way of being in the world, combined with very sophisticated technical, agronomic, botanical and ethological know-how.

Our life with plants

I was born in La Rochelle, which was in the 18th century the second largest port in the French triangular trade. Today, the port of La Palice is still a place of international transport, where logs of exotic wood imported from overseas circulate. It was almost natural for me to seek deeper in the history of the so-called "exotic" trade. The word 'exotic' was actually coined to designate these plants that were imported from overseas.

Wardian cases are an important invention in the history of plant transportation. Since the 16th Century, in the upper classes, you had to have a cabinet of curiosities for your visitors to admire. Making plants travel abroad was impossible because of the duration of the trip. Only seeds could travel, but even botanical gardens were not always successful in making them germinate. In 1829, the surgeon and naturalist Nathaniel Ward devised a system of glass crates that made it possible to transport living plants overseas. The new glass cases could be kept on deck allowing the plants to receive sunlight. The specially designed cases also protected plants from salt water, but allowed condensed moisture to reach the plants. With time and testing these cases were further developed to better protect the plants. This included the addition of crossed battens to hold the plants in place on rough crossings, and ventilation holes covered in perforated zinc to keep out rodents. In 1842, a Wardian case filled with a selection of ferns, mosses and grasses traveled from New Zealand to London without any damage.

These new inventions launched the fashion in Europe for exotic plants, and therefore for greenhouses, even for the individuals. This phenomenon is well described in the novel *À rebours* written in 1844 by J-K Huysmans. Greenhouses and terrariums, where "living objects" could be admired, replaced the cabinets of curiosity, particularly in England. There were invented the Victorian Wardian cases, ancestors to terrarium and aquarium, giving birth to the pteridomania, trend to raise ferns in tiny glasshouses to be displayed. This Victorian craze, *pterido* being Latin for ferns, was the huge love affair for ferns and all things fern-like in Britain between 1840s and 1890s. The term 'pteridomania' was coined in 1855 by Charles Kingsley.

Those very expensive collections were a must-have for the bourgeoisie. But plants were still used as (precious, delicate and expensive) objects.

Today, you can buy anthuriums and philodendrons at the corner shop or supermarket. These plants have gone from extraordinary to banal objects, almost invisible such as "waiting room plants."

I coined the term "phylloplasties" in 2012, from the Greek root phyllo, for leaves, and plaste as in plastic surgery. They are colonized plants: a terminology created from the term "colonizer plant" which is used to refer to plants that arrive first on a territory. Humanity in general tends to use plants as raw material, for food, furniture, clothes, fuel, or decoration.

Phylloplasties are alive plants that have been "augmented" with artificial additions, as a rather kitschy and silly way of seeing them again. An artificial way of making them visible, using fake nails, fake eyelashes, earrings, fake fur.

The fantastic thing is that these plants still grow despite the additions. In my *Phylloplasties* installation, more than two hundred augmented plants were growing in a kind of inverted greenhouse, with a diffusion of smells created by the nose Alienor Massenet: outside the greenhouse, a "good" smell of undergrowth, composed of 100% of chemical molecules, inside the greenhouse a "bad" smell, reminiscent of plastic and dirty hair, composed entirely of vegetal molecules. What is natural/artificial? What is good or bad?

Elisabeth Schussler and James Wandersee, two American botanists and biology educators, coined the term "plant blindness" in 1998. It is the inability to see or notice plants in one's own environment. There are cognitive and cultural reasons for which animals, even animal species no more objectively important to humans than plants, are easier to distinguish. Part of it is how we categorize the world. "The brain is fundamentally a difference detector," Schussler and Wandersee explain. Because plants barely move, grow close to each other, and are often similar in colors, our brains tend to group them together. With about 10 million bits of visual data per second transmitted by the human retina, the human visual system filters out non-threatening things like plants and clumps them together. Then there is our preference for bio-behavioural similarity: as primates, we tend to notice creatures that are most similar to us. Seeing animals as similar – or more similar – to us encourages our empathy.



Domestic tropics, Un/green collective show, Latvian fine art museum, Riga, 2019.

This ironic piece confines them to a minimal space, a portable suit where they can be smelled and touched, without invading our human space.

Plants are still often only seen as accessories: decorative "house plants" or "flat plants," although they originally come from subtropical areas. They are here hypothetically to purify our air, as claimed on many websites.

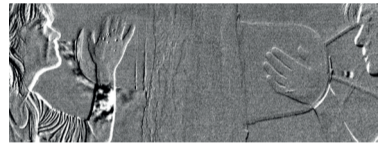


Vertimus, Karen Houle / tilted lecture, Malakoff city feast, 2019.

In 2012, I met Karen Houle at a joint conference. She is a philosopher of

ethics, a teacher at the University of Guelph and also a poet. She changed my view on plants, talking about plant ethics... At that time, very few people were talking about plant communication. She says: "Plants communicate with each other and with other species, by different means, and in different regions, above and below ground. Chemical, mechanical and electrical signals also travel underground. We naturally assume that communication requires ears - animal or human - to pick up vibrations; and eyes to receive photons of light. And above all a mouth, a palate, a tongue to emit sound signals. And of course, we assume that if true communication takes place, it will be between beings with these physical-bodily elements, those who happen to inhabit the part of the biosphere in which we live and through which we communicate: the air, above the earth, above the water, in our ecological territories." I decided I had to leave the botanic books and my studio to meet people working on all the new discoveries around plant behavior: researchers in ecophysiology of plants labs.

A few years later, she performed in a program of events I organized: a tilting lecture, where she read a poem about plant perceptions while leaning, like the audience, in order to bring everyone's inner ear into play at the same time.



Dendromacy, still from the movie, 2017.

In 2014, I met Claire Damesin. She is a tree ecophysiologicalist in the Ecology, Systemic and Evolution laboratory at Paris-Sud University. She was studying the carbon function of forests. The first thing she told me was that a tree breathes, the tree next to us is breathing; in other words, it emits a flow of CO₂ through its entire body. Moreover, a forest in poor health emits more CO₂ per year than it produces oxygen. She showed me how she measures this CO₂ level, using the IRGA measurement tool and "chambers," hermetic plastic boxes glued to the bark, isolating a specific surface to be able to measure the gas flow.

We breathe, trees breathe, we interact by changing and exchanging gasses in the atmosphere. The gasses that circulate are the same. A vital, invisible and constant symbiosis.... We decide to work together on a movie project dealing with this interspecies breathing.

But this gas is invisible: I found a camera on the internet that "sees champagne bubbles." Claire contacted the company that sold these thermal cameras, and they lent us this camera with a cooled lens that "sees" CO₂, for 2 days. It is a camera that is used in industries to detect gas leaks: an engineer comes and injects CO₂ into the pipes to see where the leak is. The representative, wearing sunglasses and a black suit, came in his black sedan in the forest to drop off a black briefcase - we had the impression of dealing drugs or weapons!

The project is called *Dendromacy*, "in intimacy with the tree." This is another neologism from the Greek root *dendro*: from the tree, and intimacy. The film set is a transparent geodesic greenhouse surrounding the trunk, to isolate it from the air flows, but leaving the view on the forest open. It's a "chamber": like an intimate and domestic space, a word also referring to the scientific "chamber" used to measure CO₂ levels.

After some trials, and as trees emit a low flow of CO₂ over the whole surface of their trunk - they do not have lungs that store and expel air - soft bells were used to concentrate the gas 24 hours before the filming, in a sufficient rate to be detected by the thermal camera.

Thus we see human breath, a dense cloudy shape. Then, by pressing the soft plastic dome glued to the bark, the tiny clouds concentrate for 24 hours.

It is important for me to show this commonality, so tenuous and, as we know, fragile.

Emanuele Coccia, philosopher and lecturer at the EHESS, talking about his book *La vie des plantes, une métaphysique du mélange* in 2018 in the journal *Télérama*:

"If you look closely, plants are everywhere: not only in front of us, transfigured in our food, in our chairs and tables, in the bodies of the animals that surround us and that have eaten them, in the air we breathe. They are everywhere, too, and especially in everything we know about the world. What we fail to realize is the extent to which plants support, nourish and shape our knowledge of the world. From agriculture to pharmacopoeia, plants do not only shape the world and the zoologically specific culture of the human animal species: they are above all the medium through which we perceive the world, we know it, we orient ourselves within it. This is the major challenge of the book: when we look at plants, we are not limited to observing a simple collection of objects, a random piece of furniture of the universe among the infinite series of things, living beings, events and ruins that populate our world. To look at plants means to look at that specific content of the world that made it and makes it constantly possible. Talking about plants means talking about the origin of our world, its perpetual beginning, which is repeated at every moment, in every place on the globe. To speak of plants means to grasp the first breath of the universe, to name the place where everything begins to breathe. This has always been the case: already in the oldest documents of our civilization, talking about plants meant grasping the fundamental features of our universe."



Constellation, cardboard dome and petri dishes, Solo show *Sometimes I hear the plants whisper*, Botanical Museum, Berlin, 2018.

What if microorganisms from human hands and tree trunks could meet? Would it be possible to show this meeting, invisible to the naked eye, a kind of cohabitation?

Matthias Rillig, director of the plant ecology laboratory at the Freie Universität in Berlin, has coined the term "community coalescence" to describe this: a random meeting of communities of microorganisms from different biotopes. Community coalescence studies in the Rillig Lab show how different communities of fungi evolve together in a limited and shared space: the Petri dish.

Before I came to know this term, two years later, we had devised the Constellation protocol with the microbiologist from the Orsay team, Ludwig Jardillier. He deduced that different biotopes must cohabit on the bark, referring to the temperature differences of the trunk caught with the thermal camera... The world of microorganisms is still now poorly understood.

Constellation is a collaborative piece. The alive part of the piece is done in workshops. First we inoculate the agar of the Petri dishes with the microorganisms from our hands. Then we go out to visit the trees around the exhibition to scrape their bark. Every participant marks her or his name, and the species of the tree. The two communities develop by cohabiting in the same space during the show (which is the exact opposite of what is traditionally done in sciences).

The geodesic cardboard dome echoes the dome of the "chamber," the setting of the film *Dendromacy*. It shows a multiplicity of life forms and possible

symbioses. The word *Constellation*, referring to the stars, establishes a parallel between observing the micro as we admire the macro in a planetarium.



Listen to the soil, exhibition "When, suddenly," University of Pluralities, Paris, 2021.



Listen to the soil workshops, since 2020.

Using a special sensor developed for the project, the workshops *Listen to the soil* allow listening to what is happening around us, underneath us. Dip a sensor into the soil and hear the sounds of the movements of several kinds of invertebrates in an environment that escapes us: the mega and meso fauna of the soil. A botanical moment of exchange between humans, with other living beings that surround us, but of which we are not always aware.

Living with the soil

Can we listen to the soil, what sounds could the soil make? When I first met Matthias Rillig in Berlin and asked him this silly question, he was surprised of my curiosity, he said: it's funny you seem interested, usually when I say to people I'm working on soil, they say, oh yerck, soil is dirty, and it means death....

I just finished the *Dendromacy* project, and because I knew of course soil is alive, I came to the idea that it must be noisy... Soil is under our feet, our perception, it is a natural environment escaping to our senses, so usually we know it very poorly.

But it's a complex alloy of living beings, nutrients and minerals in constant interaction. We are walking on a complete universe that seems important today to give voice to, in order to apprehend a world we are not conscious of.

I worked with the bioacoustician Fanny Rybak, from Neuropsi, Paris-Sud university. She is studying animal relationships through sounds. We defined a protocol, using an accelerometer, a sensor used in industries to measure vibrations of the machines. The sounds of the activity of the mega and meso fauna are recorded in different types of soils, on different sites: from the more "healthy" one, for instance a compost, to the more "chemical," for instance a field cultivated in conventional agriculture.

The black sandstone forms evoke the shapes of fungi, standing on a soil surface. The inert enclosure properties of this material allow for good diffusion of the sound sequences. The installation is like an enlarged microscopic landscape, in front of a microscopic view looking like a meteorite. Print which shows a confocal microscope view of a petri dish sample of the encounter between the micro-organisms of a hand and those of the bark of a tree (a community coalescence).

What I really love in collaborations with scientists is that sometimes it allows new research protocols to be devised. For instance, with Matthias Rillig, we started to play the sounds of collembola to samples of fungi in Petri dishes. The two on the left are witnesses that stayed in a closet. The two in the middle are ones grown in an anechoic chamber with a speaker on, but without any sound. The last one on the right stayed 4 days in an anechoic chamber under the collembola sound.

The Rillig lab is studying different facts that could stress fungi (stress here in its scientific acceptance, meaning anything that is a change in the normal evolution of the study subject, that could cause change in growth, color, shape).

I met Johannes Lehmann, in charge of the soil and crops department at Cornell U in 2017 when I was in residency at the Rillig lab. He was enthusiastic about the Listen to the soil project, and it gave him the idea to propose a new protocol to target some soil invertebrate pests through sound. With Matthias Rillig, they invited me to cosign a scientific paper in 2019: "Sounds of soil: a new world of interactions under our feet?" In *Soilsystems*, MDPI.



Trees/sounds/walks workshop, *Dé-jardiner* show, Berlin, 2019.

This project gave me the idea to share the simple experiment of going closer to trees, in order to touch them in a way that can enlarge our human sensations. It's a listening walk with microphones and headphones, to listen to our hands on the bark of trees, on the leaves.

Take the time to touch the trees, to feel and listen to their different textures under our fingers. Listen to the pollinators, the birds present on the nearby sites. Listening with "super ears" is a botanical moment of exchange between humans and the other living beings that surround us (but of which we are not always aware).



Eat the soil, culinary performances, since 2019: here in Cahors-juin-jardins.

Another idea came out from this project. Plants in a certain way, are transforming the nutrients in the soil into food for their growth. Could we, humans, like a plant, eat the soil?

Far from geophagy, listening to and eating the soil is a moment to gather around the idea that ingesting this substance can be almost magical. These soils on which we are born, in which our food grows, carry a strong symbolism and a vital energy, which must be considered as a precious asset to be protected and valued.

The sounded pieces are placed in a "landscape" looking like soil but all edible, and delicious.

Next to the installations are stacks of bowls, all different, made from the same black clay as Listen to the soil sculptures. These bowls are made in advance, during participatory workshops.

The ritual, under the sound of soil invertebrates, can begin: each participant chooses his or her receptacle, and is invited to dig, pick, and plunge in order to harvest fragments of the landscape, guessing the ingredients it is made of. It's a special moment to talk about soil, food...all together. Each participant can keep the ceramic bowl picked as a souvenir.

The performances, carried out in various territories, are the result of collaborations with gardeners, ethno-botanists, cooks, pastry chefs....

Music and dance



RRR: Rhizotron Roots Rock, exhibition *Dé-jardiner*, Grund, Berlin, 2019.

Rhizotron Roots Rock was inspired by a recent paper by Monica Gagliano, ecophysiologicalist in Sidney, inventor of the Phytoacoustic research field. The experiment is to play water sounds to roots in tubes, to see if they are sensitive to it by growing in the direction of it.

It is an attempt to create a new dialogue with the root systems of different plants. A tripartite growth vessel, based on the transparent containers used in laboratories to observe root growth - rhizotrons - was designed to let the system evolve during a couple of months. Via three tubes filled with hydrophilic gel, three different kinds of music are played in the growth chamber, to see if they can attract or repel the roots.

It is a human offer to the plants, to perhaps make them dance in their own time scale?

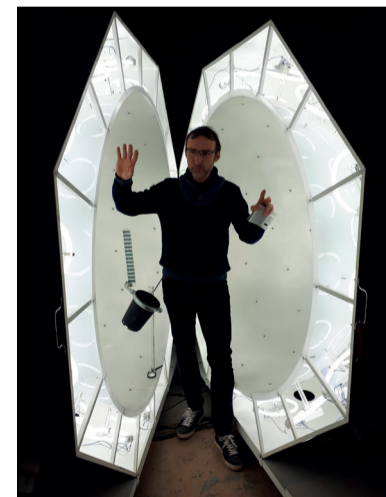
The viewer perceives this "movement" by the direction of their growth. It's a live piece in constant evolution, where the audience sits, listens to the music offered to the plants, at the same time as the plants. We can see if the different root systems are affected by the music in their form: one of the samples is a typical "Music for Plants" that can be found on the internet, supposed to enlarge plant growth; the other is a traditional Taiwanese song addressed to plants; the last one is by the band Pest Modern, Insect, a punk-rock tune.

Here, after letting the system evolve for 4 months, we could see that the Taiwanese song was the most successful, and the punk rock song seemed to cause an avoidance movement. I was secretly hoping the noisy tune would be the more attractive....

The second rhizotron, done in residency in Cornell was filled on soil, playing natural low frequency sounds. Are the roots attracted or repelled by the sounds of a caterpillar eating a leaf? An owl singing? The sounds were provided by the Lab of Ornithology. According to Stéfano Mancuso, natural low-frequency sounds are the most perceived by plants: the selection of 5 natural sounds included this type of frequencies.

It is an installation as a human invitation to the underground movement of plants. The viewer perceives this "movement" through the sense of root growth, the audience sits, listening to the music played to the plants, at the same time as the plants perceive it; we can see for ourselves if the shape of the different root systems is affected by the melodies.

RRR is an attempt to a non-scientific collaboration, an invitation for the plants to dance, at their own time and with their own ways of moving.



PIAF sphere, with Éric Badel, 2018.

How does a tree behave when only the perception of gravity and the proprioception are left to it?

At PIAF, in collaboration with the Toulouse space center, a sphere was developed that could be closed and illuminated at 360 degrees, i.e. with isotropic light, in order to test microgravity on plants. This tool is conceived to put plants in micro-gravity, by turning their pots slowly around itself.

During the first tests, the PIAF scientists discovered that plants have a perception of their own shape, like we do. They can perceive the limit of their body - this sense is called proprioception - which causes them to modulate the curvature of their axes and make them straighten up.

When I saw this sphere, I wished to use it over a long period of time, and Eric Badel launched a protocol to make a poplar tree evolve for a month in this sphere. A long tilt experiment with a poplar tree, illuminated at 360 degrees, in June 2019.



Vertimus, movie, with performer Émilie Pouzet, 2019.

A performer friend, Émilie Pouzet, explained to me that the notions of proprioception and gravity were part of several methodologies used in contemporary dance, around micro-movements.

I had the idea of a dance duet between a human and a plant based on the experience in the sphere.

For the performer, this is an almost impossible task, because our body structure is obviously different from that of a sapling. We rehearsed from the images shot in the sphere to make a kind of phytomorphism: the human is here trying to reproduce the movements of the plant.

You have to project yourself mentally into this movement, to enter a different time, since a sequence of movements carried out by the human body in about 4 minutes for the film *Vertimus*, lasted more than two weeks for the plant, at the rate of one image every 30 minutes.

The awareness of the body's limits is shared by the plant and the human, and allows both beings to balance all its parts in the recovery. What is shown side by side is a duet danced on the same scale.



Stop motion film of a bean growing until it catches the only stake in the room.

Plants exist in a completely different time dimension than we do, and that is why it is sometimes complicated to grasp the full finesse of their perceptions.

In 2019, I had the chance to meet Paco Calvo, a plant behavior philosopher, who is responsible for the MINT laboratory in Murcia: the laboratory of minimal intelligence. He showed us an experiment with a bean. In this room a bean grows, but the vertical support it needs is deliberately placed too far away.

After growing in a spiral, as it's normal for this plant, the bean perceives the stake very well, and starts to grow by behaving like a fishing rod, balancing its leaves in order to adjust its efforts and finally succeed in hanging on.

Scientists have proved plants perceive colors and shapes.



Night bloom, participative performance carpets for humans and evening primroses.

Night bloom is a project around a forgotten tradition, the moonlight gardens. These gardens were created in China. Their beauty is only revealed by the moonlight. In this type of garden, all plants bloom at night, in a range of white to yellow colors, often with sweet scents.

Night bloom is the result of collaboration with a gardener, who grows a selection of night-blooming plants on the site of the performance beforehand. The evening primroses for instance have the capacity to bloom in a time that can be shared with

humans: between 5 and 20 minutes.

This is an invitation to come and meet them, sitting or standing, with your feet planted in an archipelago of carpets. Those objects are here to put you in an immobility position, and to enlarge your perception in a simple way by staying at the same place for a moment. You are invited to be barefoot, because this carpet includes a hole to feel the grass on your toes, with the warm sensation of the wool.

We share in real time a moment in the life of a plant, a daily and precious event because their time is usually beyond our conception, because it is too "slow" for us.

To accompany this time of sharing between humans and plants, a selection of scientific, poetic or romantic texts about these moon gardens was read by Astrid Steffesen, in charge of the Gamble By gardens in Aarhus.

To quote Baptiste Morizot again, I think my artistic research with all its collaborations takes part in what he calls "interspecies diplomacy."

Leading for Sustainability in a Fractured Knowledge World: Inquiring into Representational and Collective Aspects through an Online Arts-based Intervention

Kristina KURAPKAITYTE & Svenja TAMS

Summary: The workshop used an arts-based intervention to collectively inquire into modes of leading for sustainability. The intervention invited participants into the online collaborative drawing platform *aggie.io*, where they represented a cubist painting and a photograph. The images speak to the human gaze on our fractured relationship with nature. The intervention is designed as a playful liminal space in support of self-reflection and generative learning. It creates a set of disruptive conditions – e.g., a difficult collective task, puzzlement, complexity and dialogue – through which participants are prompted to question leading for sustainability as comprising representational and collective practices.

Format online interactive workshop, 90 minutes duration.

Disciplines our workshop is informed by: leadership studies, sustainability management, practice studies, existential philosophy, arts-based learning methods, digital learning platforms, gamification

THEORETICAL BACKGROUND

The online arts-based workshop is a generative action learning intervention (Chiva et al., 2010) through which participants can inquire into representational and relational challenges of leading for sustainability.

The workshop invites attention to the ways by which leadership practices represent the world (Bakhtin, 1993) and the problems on which they seek to act (Grint, 2005). Questions of representation are central to leading for sustainability. For example, concepts such as the Triple Bottom Line (Elkington, 1994) and the Sustainable Development Goals (Sachs, 2012) reflect efforts to broaden organizations' representation of purpose in terms of economic performance with a wider range of social and environmental impacts. Yet, these imageries have been called into question as they reduce the complexity and interdependencies of sustainability work (Elkington, 2018; Milne & Grey, 2013). Inspired by Bakhtin (1993), we propose that leading for sustainability faces several challenges of representation:

- The tendency of management to squeeze sustainability into the straitjacket of abstract, linear and instrumental thinking, the same kind of 'dehydrated' management thinking that has alienated us from our pre-conceptual existence in natural systems (Adler, 2010).
- Its embeddedness in a fractured knowledge world, produced by the interactions of a fast-paced knowledge economy, diverse worldviews, global inequalities, and the growing power of a few corporations (Waddock, 2007), including the discursive struggles about sustainability practices and systems among the diverse actors of emerging sustainability issue fields (Tams & Marshall, 2011).
- Cultural limits to leadership participants' capacity to fully engage with the entwinement of human existence in nature.

While leading for sustainability is, thus, always constrained by actors' partial knowledge, our workshop explores how engagement with questions of representation may enable leadership participants to embrace the inherently alienated and fractured conditions of their efforts, mindful that they work with never-fully-knowable and end-less 'wicked' problems (Grint, 2005).

Second, our arts-based intervention engages participants in the collective aspects of leading for sustainability. Its situatedness in a fragmented knowledge world means that it is not well served by the prevailing modus of leadership, where leaders selected by virtue of their position in organizational hierarchies are entrusted with aligning other people to an organization's abstract goals. Embracing the fractured condition of leading for sustainability enables us to explore other modes of leadership. Among the various sources of inspiration is the growing stream of relational, collective and constructivist approaches of leadership (e.g., Grint, 2005; Isaacs, 1999; Ospina et al., 2012; Raelin, 2005). Informed by this stream, we view leading for sustainability as a participatory practice through which the diffused embodied, local knowledge across a wider field of concerned actors co-constructs the social realities and problems upon which they seek to act. Inspiration can also come from aesthetic approaches, which attend to the ways by which arts-based practices enable and constrain the integration of diverging and trans-contextual perspectives on our fluctuating world (e.g., Bateson, 2016; Bakhtin, 1981; Sgourev, 2013). This, we argue, can generate more inclusive, holistic and committed responses to our complex sustainability challenges. In this spirit, our arts-based intervention enables participants to inquire into the aesthetic qualities of leading for sustainability.

SET-UP

To participate actively in this online intervention, active participants (painters) must use an electronic device (computer, rather than tablet).

PROCESS

- Introduction to the task and set-up (10 minutes)
- Collaborative drawing activity (25 minutes)
- Reflective dialogue (25 minutes) inquiring about questions such as:
 - What can we learn about the aesthetic qualities of leading for sustainability?
 - What insights can we generate about the collective, interactional qualities of leaderful practice for sustainability?
 - What can we learn about the challenges of representation in the context of leading for sustainability?
 - How can participatory arts-based interventions be a tool for engagement and action research in leading for sustainability?

WORKSHOP INTRODUCTION

Our Title "Leading for sustainability in a fractured knowledge world" borrows from Sandra Waddock's (2007) essay in *Academy of Management Learning & Education*.

Our use of an online collaborative painting activity is not about arguing that collaborative painting or arts-based methods, which are borrowed from arts therapy, are miraculously transforming the ecological crisis.

Rather, our activity invites you to experience and observe two issues:

- The first issue is an invitation to explore how we see, how we perceive sustainability and the ecological crisis.
- The second is about how our ways of seeing sustainability – or not seeing it – are connected to our collective actions and our ways of leading for sustainability in the context of ecological crisis?

So, how is leading for sustainability different from conventional thinking about leadership?

In leading for sustainability, our knowing about the object of our leadership is not clear cut. In conventional leadership we assume that leadership is about 'the leader aligning people to organizational objectives'. In leading for sustainability, this assumption does not hold. The object or the knowledge about sustainability is problematic, ill-defined, uncertain, constantly emerging, shifting territories. Our knowing about sustainability is "fractured."

Fractured can mean two things.

Fractured can refer to our diverging perspectives on sustainability:

- For some, it is all about "net zero," ESGs, and selling sustainable polyester clothing
- For others it is about ecological, eco-centric and regenerative being on planet earth

"Fractured" also has another meaning.

The ways by which we speak about sustainability, or tell "a good story" about our sustainable actions, our use of images, case studies, spreadsheets, environmental-impact reporting, slides, infographics, workshop canvases, illustrations, videos, our websites and campaigns,

... the posts we like on LinkedIn with the belief that doing so can show our own commitment and mobilise others to action ...

... all of these represent our fractured relationship as part of living nature – Gaia.

Many of these images – such as the Triple Bottom Line, ESG, net zero, circular economy diagrams, Sustainable Development Goals, and even pictures of polar bears on floating ice shields ... all seemingly put us back into control.

There we have something nice and square or round, bounded, tangible – outside of us – to manage and control with our action for sustainability.

How are these images helping us to live more sustainably?

Are they generating an illusion of agency and control, when really it may be more fitting to embrace the simple fact that living life and being part of nature is constantly emerging, beyond our knowing, beyond our control?

WORKSHOP FLOW

- Introduction to the task and set-up (10 minutes)
 - Each participant is invited to sign an online consent form. (Pending participants' agreement, we may record the collective inquiry for sharing among participants and for research purposes.)
 - Participants can choose their real name or alias to stay anonymous.
 - Participants will be familiarized with the digital drawing platform <https://aggie.io/>.
 - They can choose between roles as painter or observer. The group must consist of four painters and at least one observer.
 - Participants must have the original image open on a separate tab. The image will be shared.
- Collaborative drawing activity (25 minutes):
 - Four painters have 10 minutes to copy Pablo Picassos' cubist painting on the <https://aggie.io/> platform.
 - During those 10 minutes, the communication between the painters uses only "dialogical" questions (no answers allowed). For instance:
 - Painter Nr.1: What could be a possible starting point?
 - Painter Nr.2: How could we copy the original painting in the best way?
 - Painter Nr.3: Why has the original painting no [...]?
 - Painter Nr.4: Why does the original painting represent [...] in that way?
 - The observers remain silent during the drawing session.
 - The hosts inform participants when five minutes have passed and 1 minute before the end.
 - The hosts take screenshots of the final drawing.

3. Reflective dialogue (25 minutes)

Informed by a generative Action Learning approach (Chiva et al., 2010; Revans, 1982), the hosts facilitate individual and collective reflection about questions such as:

- What is important when we use images or text or stories to engage/mobile others in the ecological crisis?
- What have you learnt about leading for sustainability?
- How could participatory arts-based methods be used to engage others in sustainability?

Notes from the discussion:

- The online drawing activity was seen as an analogy to the search for sustainability solutions through the diverse knowledge bases that people bring to complex sustainability problems, in so far as it placed participants in a situation where most of them lacked competence in the field and held different knowledge and expertise in relation to the painting platform.
 - One observer noticed the fragmentation of knowledge that became visible through the collective drawing process.
 - Participants observed that starting to draw while having nothing at stake allowed them to act respectfully toward each other. The activity encouraged the personal freedom to appear unskilled and even "ridiculous" in the moment, while sharing a joint global interest (for the activity, as may



Pablo Picasso (1939) *Still life with bull's skull*, oil on canvas.



be the case when working collectively for sustainability).

– It was also observed that the arts-based activity could be seen as a “bubble,” where power and leadership is not identified with a single person. This prompted discussion about how a relational leadership mindset experienced in this arts-based intervention could be transferred to other organizational situations, where there is more at stake for participants?

– The notion of leadership as stewardship was raised as the capability to transcend particular personal interests. Indeed, the collective drawing activity required the ability to transcend one's own interest and perspective, which is comparable to transcending personal interests when working on ecological or social issues.

One participant observed: “Activities like the painting exercise in this session utilize a different part of our brains, which is useful for engaging higher order cognition and creative thinking.”

REFERENCES

- Adler, N. J. (2010). Going beyond the dehydrated language of management: leadership insight. *Journal of Business Strategy*, 31(4), 90-99.
- Bakhtin, M. M. (1981). *The dialogic imagination: Four essays*, ed. Michael Holquist, trans. Caryl Emerson and Michael Holquist. Austin: University of Texas Press.
- Bakhtin, M.M. (1993) *Toward a Philosophy of the Act*. V. Liapunov (translation), V. Liapunov & M. Holquist (eds.) University of Texas Press.
- Barry, D., & Meisiek, S. (2010). Seeing more and seeing differently: Sensemaking, mindfulness, and the workarounds. *Organization Studies*, 31(11), 1505-1530.
- Bateson, N. (2016). *Small Arcs of Larger Circles: Framing through other patterns*. Triarchy Press.
- Chiva, R., Grandío, A., & Alegre, J. (2010). Adaptive and generative learning: Implications from complexity theories. *International Journal of Management Reviews*, 12(2), 114-129.
- Elkington, J. (1994) Towards the Sustainable Corporation: Win-Win Business Strategies for Sustainable Development. *California Management Review*, 36, 90-100.
- Elkington, J. (2018). 25 years ago I coined the phrase “triple bottom line.” Here's why it's time to rethink it. *Harvard Business Review*, 25, 2-5.
- Grint, K. (2005). Problems, problems, problems: The social construction of 'leadership'. *Human Relations*, 58(11), 1467-1494.
- Isaacs, W.N. (1999) ,Dialogical

Leadership' in: Dialogue and the Art of Thinking Together, *Doubleday*, reprinted in *The Systems Thinker*, <https://thesystemsthinker.com/dialogic-leadership/> (accessed 8 June 2021).

Milne, M. J., & Gray, R. (2013). W(h)ither ecology? The triple bottom line, the global reporting initiative, and corporate sustainability reporting. *Journal of Business Ethics*, 118(1), 13-29.

Ospina, S. M., Foldy, E. G., El Hadidy, W., Dodge, J., Hofmann-Pinilla, A., & Su, C. (2012). Social change leadership as relational leadership. In M. Uhl-Bien & S. M. Ospina (Eds.), *Leadership horizons. Advancing relational leadership research: A dialogue among perspectives* (p. 255-302). IAP Information Age Publishing.

Raelin, J. A. (2005). We the leaders: In order to form a leaderful organization. *Journal of Leadership & Organizational Studies*, 12(2), 18-30.

Revans, R.W. (1982), “What is Action Learning?”, *Journal of Management Development*, 1(3), 64-75.

Sachs, J. D. (2012). From millennium development goals to sustainable development goals. *The Lancet*, 379(9832), 2206-2211.

Sgourev, S. V. (2013). How Paris gave rise to Cubism (and Picasso): Ambiguity and fragmentation in radical innovation. *Organization Science*, 24(6), 1601-1617.

Tams, S., & Marshall, J. (2011). Responsible careers: Systemic reflexivity in shifting landscapes. *Human Relations*, 64(1), 109-131.

Tams, S. (2020). The dynamics of responsible careers and their impact on societal issues: A conceptual framework. In Laasch, O. et al. (eds) *Research Handbook of Responsible Management*. Cheltenham, Edward Elgar Publishing, pp. 565-581.

Waddock, S. (2007). Leadership integrity in a fractured knowledge world. *Academy of Management Learning & Education*, 6(4), 543-557.

Investigating Aesthetics, a Lexicon

Christine LAQUET

My hypothesis is that if we change our human-centric point of view and take into consideration the influence of non-living factors on us and our impact on our surroundings, then we may figure out how to inhabit the world differently.

CREATIVE PRODUCTIONS

have an important role to play in thinking about alternative modes, and promoting the conception and implementation of solutions as we traverse the Anthropocene.

Artists are able to invent conceptual, critical, and practical tools to open new avenues of inquiry at all scales of our individual and collective existences.

MY AIM AS A VISUAL ARTIST

is to explore how aesthetic practices are able to influence relationships based on “a combination of sensing and sense-making” (Fuller & Weizman), building a backdrop for critical investigations.

I believe that socially engaged and inclusive research methods are able to create a vibrant image of other-than-human collaborations, providing unusual models that connect and integrate new frameworks.

MY WORK

is addressing the advent of a new space from a variety of perspectives as an imagined dialectic between life on Earth and life in space, how future planetary life relates to space exploration

A TYPICAL PROCESS OF CO-CREATION

questions the authorship position questions how artistic practice can

make epistemic claims by shaping narratives that make room for diverse forms of existence by exploring unfamiliar collaborations with other Earthlings, animate and inanimate.

FRAMEWORK

I propose a framework of three interdependent components consisting in three factions: the geo, bio, and exo.

- Geo is concerned with a lifeless thing, inorganic substance.
- On the contrary, bio is concerned with life and organic substance.
- Exo is what is foreign, alien.

ANIMAL – VEGETAL – MINERAL

At scales greatly inferior and that vastly exceed us, microscopic and macroscopic forces are shaping our day-to-day lives. Every living thing is in continuity with the nonliving in constant interdependent movement.

Understandings of reality built on the idea of “entanglement of everything” (D. Haraway) can be facilitated by artistic practices, making visible sensory relations that society doesn't always concede, think, or imagine.

MINERALS

and other objects perceived as inert have important influences on the world around us.

Although geological phenomena have no life in themselves, they influence living things.

“We are walking, talking minerals” (Vernadsky). We are geo-creatures both in the sense that our bodies are made of Earth's matter (carbon, calcium, iron, water, etc.) and depend on a host of other bodies to survive. We tend to overlook this geo-bio intertwinement.

OTHERNESS IN THE STONINESS

With the concept of Otherness in the Stoniness I seek to disrupt the idea of something that seems stable/inert and I suggest to reinvest our notion of scope and to expand our terrestrial perceptions.

METEORITES

Due to their significant age, meteorites are often beyond human understanding. They contain thousands of elements including amino acids, the building blocks of life.

One of the rarest substances on Earth is the Black Beauty meteorite, a 4.43 billion-year-old fragment of the Martian crust. In collaboration with the Centre for Star and Planet Formation [GLOBE Institute and Natural History Museum of Denmark], I investigate to understand the early history of the red planet, including its potential habitability, as well as how it inspires us in relation to the matter of other non-living bodies, the human body, the bodies of the nonhuman living, and other celestial bodies.

ON-GOING

Humankind has an inescapable desire for space exploration. Today more than ever, two visions are in discord: one contemplating a type of neo-colonial expansion, the other focused on understanding the evolution of our solar system as a window onto our origins and searching for habitability beyond Earth.



In 2017 and 2019, I worked on two exhibition projects involving meteorites (on loan from Natural History Museums) that I was bringing back

to the places where they landed. By chance, both of them originated from the asteroid belt, and happened to have landed within the time period of my exhibitions. I decided to organize a Meteorite's Birthday Performance Walk, first in Rocheservière, then in Aarhus with the same protocol. I surveyed a walk in the elliptical area of the meteorite's impact, where one step symbolized 100,000 years, the circuit designed so that the gathered public could pace out the age of the meteorite (~4.56 billion years).



Exhibition

ÀTEINDREUNERAISONANCE. A vocal vibration searches and augments the harmonics of a particular space; the amplification of the waves approaches the resonant frequency of the structure, establishing a subtle line of communication. Each space is thus defined by a note. Strings are used to inform the physical dimensions of the spaces, a color is then assigned according to an established palette. This protocol allows a color and sound spectrum to be defined for each architecture. On the wall, the strings are stretched like an abstracted map. Suspended at each end is a specific stone, picked up in the Sahara Desert. The weathered stones' surfaces appear soft with lines like veins, and their colors vary in a range similar to human skin tones. Skin color, vocal color. The installation is conceived as a tense flow where body, spaces, sounds, and colors are entangled.



Topographies [Terre d'ombre brûlée] (détails). Série de 12 dessins (bâton à l'huile couleur Terre d'ombre brûlée) sur plaque d'aluminium (offset), 103 x 40 cm chacun, 2021. D'après Géographie Physique, Unité de l'idée de montagne chez Alexandre von Humboldt, 1842.

Ground Works / Vibrant Ecologies of Research

Dr. Aaron Knochel



Ground Works is a compendium of exemplary interdisciplinary arts-inclusive collaborative research projects, and a hub for reflection on the processes that drive such work.

Ground Works periodically invites guest editors to organize Special Collections that invite related submissions and gather exemplars that call attention to key themes surrounding deep disciplinary integration. These Collections, and the projects and commentaries represented within them, intend to deepen our understanding of the ways to effectively weave arts-based inquiry into the scholarly fabric of research.

The special Issue: Vibrant Ecologies of Research, was awarded Best Special Issue for 2022, by the Council of Editors of Learned Journals (CELJ).

Aaron Knochel developed this special issue as a guest editor of the online, open access journal Ground Works.

The original call for papers reads: "Organizations like Alliance for the Arts in Research Universities (azru) highlight a growing trend in higher education that the arts not only play a vital role to campus culture but to research and teaching as well. Education researchers and major granting agencies have increasingly recognized the importance of artists' and designers' contributions to dynamic and evolving knowledge, community building, and cultural production. Whether it be an increasing emphasis on the fluidity of knowledge and inquiry through movements in S.T.E.A.M. or elevating the role the arts and education can play in some of our most vital professions in healthcare and medicine, creative practice is getting a lot of attention from academia.

Yet, while all of this discourse gushes on the impact of the arts, there is a lot to be learned about how to cultivate fertile ground for this vital work so that it is nimble and responsive in the fast-changing world of higher education. In other words, what are the elements necessary to create a vibrant ecology of research where art and design inquiry may flourish alongside, within, and out of social and physical science research that is so deeply embedded within the fiber of research-oriented universities? "Ecology" in this sense focuses on the relationships that bind component parts into ecosystems and may be used to understand a wide array of social and cultural production.

The Alliance for the Arts in Research Universities (azru) issues this special call for submissions to its online peer-reviewed collection of interdisciplinary arts projects, Ground Works.

In this special issue of Ground Works, we welcome submissions that focus on deepening our understanding of the institutional, social, and epistemological systems that effectively weave arts-based inquiry into the scholarly fabric of research. Vibrant ecologies of research call attention to the complex and nuanced articulations of how institutions, research groups, and organizations come together and what elements allow them to thrive. Thinking ecologically provides a systematic view while also attending to the material agencies, institutional architectures, and human interrelationships that nurture, foment, and/or cultivate deep disciplinary integration. The Vibrant Ecologies of Research call for submissions suggests the following possible threads:

- What forms of leadership, resources, and institutional structures most effectively impact research agendas across disciplines?
- How might these entangled and productive ecosystems be analyzed or understood so that other institutions, scholars, and communities may benefit?
- How does disciplinary operate in these ecosystems? What are its material and

human components and how may they be sustained?

- How responsive are these ecologies so that they may remain vibrant, productive, and impactful in light of social and cultural upheaval? How may productive ecosystems respond to failure?
- How might vibrant ecologies of research provide leadership and vision in models of diversity, equity and inclusion?

Submissions are encouraged to share mature case studies of practice but are also encouraged to deepen our understandings of systemic perspectives that affect these cases. Submissions should include concrete examples of the ecosystem in question, leveraging Ground Works capacity to feature rich media, as well as analysis or explication of the ecology. We are actively seeking submissions that further conversations focused on the vitality of arts-based inquiry in spaces of research that extend, augment, or mutate conceptions of knowledge, ethical decision making, and accessibility to research cultures. Ground Works encourages a wide array of submission types that incorporate multimedia to tell the story of your vibrant ecology of research.

Submissions from both academic and non-academic settings are welcome. Successful submissions will have achieved some initial recognition; they may be collaborative or sole-author, but should demonstrably advance general understanding of how the arts and other disciplines can be successfully integrated. Selected submission will be included in a special issue of the Ground Works online, open-access showcase of exemplar projects that contribute to understanding of the practices that underlie arts-integrative and interdisciplinary work.

As with all submissions to Ground Works, submissions to Vibrant Ecologies of Research begin with a brief suitability review that includes a short summary of the project, a statement of relevance, and appropriate links (sign in to begin the submission process and see specific prompts). These are reviewed by Editors for fit with the Vibrant Ecologies of Research special issue, and with the scope and mission of the journal. There is an anticipated 10-day turnaround on decisions in Stage 1.

Submitters may then be invited to the second project review stage (anticipated two month turnaround), in which they provide a focused 1,000 word narrative, as well as media for their project. Stage 2: submissions will be examined by two external reviewers. Successfully evaluated projects are included in our online compendium, and their authors are invited to contribute reflections on their process and effective practice."

In "Vibrant Ecologies of Research," Paul Shrivastava, Lazslo Zsolnai and Philippe Mairesse develop their vision of transdisciplinarity for the Anthropocene, see p. 24.

The rolling call for submissions to Ground Works and current special calls can be found online at



Violence organisationnelle : Retour sur une performance théâtrale pour faire ressentir, exprimer et comprendre

Yves HABRAN, Régis MARTINEAU & Andréa FERRERO, Lorna GIRARD & Lohan ACCOGLI, élèves du Conservatoire Régional Gabriel Pierné de Metz, encadrés par Vincent GOETHALS

La violence n'est pas un phénomène qu'a priori l'on s'attend à trouver dans le monde normalement aseptisé des organisations. Les organisations ont tout intérêt à prendre soin, en interne, de leurs « ressources humaines », de leur motivation, et de leur carrière ; et, en terme d'image externe, elles ont intérêt à prendre soin de leur « marque-employeur » et de leur réputation. Pourtant, la violence est omniprésente dans les organisations et dans les expériences quotidiennes de chacune et chacun. Si l'on n'en est pas victime soi-même, on est souvent au contact de personnes qui en souffrent ou en ont souffert.

Cette violence organisationnelle fait surface, très régulièrement, dans l'actualité médiatique et juridique (le scandale Orpéa en est le dernier exemple récent en France) ; mais aussi artistique. Le cinéma, surtout, s'en fait très régulièrement l'écho. Dernièrement, par exemple, on a pu voir *Un autre monde* de Stéphane Brizé (qui complète son triptyque commencé avec *La loi du marché* et poursuivi avec *En guerre*). On a pu aussi voir *Corporate* de Nicolas

Silhol, ou encore *Ressources Humaines* de Laurent Cantet.

Si la violence se prête si bien aux mises en scènes artistiques, elle est en revanche difficile à appréhender du côté de la recherche académique. Elle est en effet une réalité complexe et un concept sous-théorisé, extrêmement difficile à appréhender : « elle est [un phénomène] matérielle et symbolique ; structurel et aberrant ; collectif et individuel ; visible et invisible ; légal, extralégal et illégal ; brutal et subtil ; sporadique et quotidien ; et spectaculaire et banal » (Kilby, 2013 : 263). De plus, différentes personnes ou communautés ne le vivent pas de la même manière ou avec la même intensité : c'est un phénomène multidimensionnel, contingent et instable, à la fois omniprésent et parfois invisible (Costas & Grey, 2018). Il est donc très difficile scientifiquement de caractériser ce phénomène.

C'est pourquoi, à l'instar du cinéma, nous avons eu recours à une mise en scène, théâtrale cette fois, pour mieux faire appréhender cette violence organisationnelle. Nous avons recueilli des témoignages réels de salariés, retravaillés, ré-écrits puis interprétés par trois acteurs et actrices, Andréa Ferrero, Lorna Girard et Lohan Accogli, élèves du Conservatoire Régional Gabriel Pierné de Metz, encadrés par Vincent Goethals. Andréa commençait par un témoignage, qui nous fait apercevoir les conséquences de la violence organisationnelle, dont on voit bien ici qu'elle est à la fois puissante et dévastatrice, mais difficile à cerner, mélange de violence physique et morale.

J'en ai assisté à des choses en dix ans de service dans cette boîte...

Quand on venait de m'embaucher j'étais pleine de rêve et d'ambition, pleine de bonne volonté, je voulais tellement bien faire et être bien perçue de tout le monde.

Les années passent et je me suis éteinte. La flamme ne brûle plus, quand je rentre maintenant à la maison, à cause de la pression au boulot je supporte plus mes enfants. Je m'en veux parce qu'ils n'ont rien demandé... à cause de ça je me dis que je suis une mauvaise mère, alors que j'aime mes enfants du fond du cœur.

Pourtant, dès le premier jour j'aurai dû me douter de ce qu'il allait se passer. Mon manager m'a dit « je ne t'ai pas choisi. ». Ah. Qui l'a fait alors ? au fur et à mesure, les RH, nous traitaient comme des pions, des cibles, ils s'amusaient à nous rabaisser, je me souviens qu'une fois l'un de mes rapports n'étaient pas bon, mon manager est venu me voir et m'a craché dessus. Comme si je n'étais qu'un vulgaire objet.

Tous les jours il y'a des collègues qui craquent, c'est dur à voir... mais je fais comme si de rien n'était et je prends mon PC pour travailler ailleurs. Tout le monde lâche, tout le monde devient leurs pantins, leurs marionnettes à chiffre. Toujours plus encore... même mon corps lâche.

Quand le vendredi arrive, je sens mes jambes tomber sous le poids de la fatigue. Je suis épuisée, j'ai des crises d'angoisse, je manque de confiance pour entreprendre quoi que ce soit... (silence) à mon âge, quand même c'est terrible, je suis tellement tombée dans le trou que jamais j'arriverai à remonter la pente mais je n'ai pas osé aller voir le médecin de la boîte, je ne veux pas qu'on mélange, qu'on aggrave mon cas.

Les suicidés on a dit qu'ils avaient des problèmes personnels.... Je ne veux pas être comme eux. C'est le boulot mon problème, ma vie perso tient la route tant bien que mal...

J'ai assisté à ce qu'a subi une collègue. La chef la poursuivait et lui demandait constamment quand elle partait. Jusque sur le quai du métro... je n'ai rien ne dit à personne... c'est mon chef, si je balance il me fout à la porte... J'ai trop peur. Tout le temps, peur de comment j'ai formulé ma phrase, de mon attitude, de mon sourire, était-il bien placé ou pas ?

Je n'ai plus d'état d'âme... je ne fais qu'exécuter les directives... tant que je tire mon épingle du jeu je suis tranquille... ça va vous paraître amoral mais j'ai une famille à nourrir.

Un second témoignage, interprété par Lohan, nous fait comprendre qu'il y a, dans la violence organisationnelle, un manque de reconnaissance de la qualité professionnelle et de la compétence de l'individu. Il est ressenti comme une dévalorisation de l'individu en tant qu'être humain, avec tous les impacts dans la sphère familiale que cela entraîne.

Avant dans mon entreprise j'avais mon propre bureau, j'étais cadre j'aidais ma boss pour l'administratif. Quand on a fait faillite j'ai tenu la boîte

à bout de bras en attendant qu'il y ait un repreneur. J'avais hâte qu'il arrive, aider pour l'administratif c'est une chose mais gérer une boîte c'en est une autre.

Quand il est arrivé j'ai vite déchanté, on est dans une boîte de menuiserie mais il n'a aucune connaissance du métier, il est juste là pour gérer un groupe et optimiser le profit. Tout ce qu'il veut c'est faire plus d'argent aucune considération pour la relation client ni pour le travail bien fait, et bien sûr pas de considération pour ses employés.

Il a tout de suite lancé un réarrangement des équipes avant même de faire connaissance avec ses nouveaux employés. Son but était de mettre à la porte les gros salaires et les très vieux avant qu'ils partent en retraite. Moi à 54 ans avec mon poste de cadre j'étais la cible numéro une. Il m'a changé de poste, j'ai perdu mon bureau, ma place dans l'équipe de gestion, et peu à peu ma dignité. Alors c'est ça d'être mis au placard on nous prend tout, sans considération humaine ? Non pour eux on est plus humains on est juste des chiffres sur un tableur.

Aujourd'hui au boulot j'ai l'impression de n'être qu'un fantôme errant dans les couloirs. Ceux qui me regardaient autrefois comme le sauveur de la boîte me regardent comme un indésirable qui ralentit le chiffre d'affaires. Le travail m'épuise, même pas physiquement, non la fatigue elle est mentale, ils jouent là-dessus de toute façon, ils vous font sentir comme une merde, et ça marche je me sens vraiment comme une merde...

Ma femme et mes filles me disent d'arrêter, mais la grande va bientôt rentrer à la Fac, comment on va faire pour lui payer ses études avec un salaire ? Non je dois continuer j'ai pas le choix, tenir c'est le maître-mot, rien lâcher et tenir et pour ça je crois que j'ai trouvé une solution, j'ai un peu honte mais je me suis mis à boire... c'est con mais ça m'aide à pas trop penser au boulot et à tout ce que j'ai perdu, ça m'aide à pas penser à l'idée que les gens seraient mieux sans moi.

Des tableurs, des chiffres, des objectifs à atteindre... Derrière la violence organisationnelle, en filigrane, les chiffres sont omniprésents. En tant que chercheurs en contrôle de gestion, cela n'a pas manqué de nous interpellé, car, pour nous, les indicateurs et les tableaux de bords sont normalement des outils, des aides, et non des instruments de torture. C'est pourtant ce qu'ils deviennent parfois, comme dans le troisième témoignage interprété par Lorna.

Déjà quand je prenais les appels c'était l'enfer. Les chiffres, les chiffres, toujours les chiffres, cette charge mentale planait constamment au-dessus de nos têtes. Et forcément le travail était mal fait. On se faisait tous descendre, encore les chiffres, c'était un cercle vicieux. Les pauses de plus en plus courtes, de moins en moins de primes, on venait nous chercher jusqu'au toilette si on prenait trop de temps, c'était surréaliste.

Et puis je voyais tous ces gens partir, les uns après les autres, on se demande, « c'est quand mon tour ? » et ça a pas loupé. Ils ont tout fait pour que je parte de moi-même, à commencer par supprimer mon poste. « On a rien contre toi hein », tu parles, je me suis retrouvée dans un placard, à faire un boulot de retraité, à un niveau bien en dessous du mien.

Je me sentais inutile.

Et quand je rentrais chez moi j'étais un vrai légume, j'étais vide, dégoûtée. Ma fille me voyait comme ça, elle me disait « change de métier », « ça peut plus continuer comme ça » et moi je savais pas quoi lui dire parce qu'elle avait raison. Mais il fallait bien que je lui donne à manger, que je paye le toit qu'elle a au-dessus de la tête, la voiture qui la ramène à l'école.

Je pouvais pas partir comme ça. Vous savez, au début, je voulais juste avoir un minimum d'estime pour les gens avec qui je travaille. Mais les derniers mois je voulais juste que ça s'arrête. Quand je regardais par la fenêtre du premier

étage, c'était pas le ciel que je regardais. Je comprends très bien ces gens qui sont passés à l'acte.

Nous montrons, dans notre recherche, que les nombres sont généralement instrumentalisés à travers trois mécanismes. Un premier mécanisme, assez classique, concerne l'utilisation de chiffres pour faire pression sur les individus. Si les chiffres deviennent hégémoniques dans le management, cette pression peut même devenir une forme de harcèlement, notamment à l'encontre de « mauvais performeurs » (« J'ai vu tes chiffres, c'est une blague ? ») Deuxièmement, les chiffres servent à mettre l'accent sur l'éthique de la performance, en particulier financière. Celle-ci peut cependant, notamment quand l'insistance sur les chiffres est forte, entrer en conflit avec des valeurs alternatives, comme par exemple le travail bien fait. Les employé·e·s peuvent alors se sentir contraints de faire des choses qu'ils ou elles réprouvent moralement. Ils deviennent, en quelque sorte, étrangers à eux-mêmes (« L'essentiel, c'est que le chiffre soit bon, peu importe comment et qui et où » ; « Tu t'en fout, le client tu lui vends le truc, même si tu sais qu'il n'en a pas besoin »). Troisièmement, les chiffres, lorsqu'ils sont considérés comme des objectifs incontestables, peuvent servir à justifier des comportements et des modes de management éthiquement problématiques. Ceux-ci peuvent porter atteinte à la dignité des personnes et entrer en conflit avec ce que l'on pourrait appeler, à la suite de Lévinas (2012), une éthique relationnelle. Le chiffre peut par exemple « autoriser » des comportements d'exclusion ou de stigmatisation et les personnes visées se sentir traitées comme des « pions » (« T'es le plus mauvais, le plus nul au centre » ; « T'es pas rentable, qu'est-ce que tu veux ? »). Dans l'intervention collective d'Andréa, Lohan et Lorna, très rythmée, on ressent ces trois aspects.

*Lohan : Faites du chiffre, du chiffre
Andrea : Il faut que vous soyez rentable
Lorna : L'essentiel, c'est que le chiffre soit bon, peu importe comment et qui et où
Andrea : T'as vu tes résultats ?!
Lohan : Du rendement, du rendement !
Lorna : Et les actionnaires, vous y avez pensé ?
Lohan : On vous a donné des objectifs
Andrea : J'ai vu tes chiffres, c'est une blague ?
Lorna : Ton bilan n'est pas bon
Andrea : D'abord, on supprime les augmentations et les parts variables
Lorna : Si vous faites pas vos chiffres et ratios, ça va pas être possible
Lohan : Et avec ça tu voudrais une promotion j'imagine
Andrea : C'est le prix normal à payer
Lorna : Avec des chiffres pareils, tu le mérites ton salaire ?
Andrea : Mauvaise insertion dans l'équipe 19
Lohan : Et tu me parles d'augmentation ?
Lorna : Trois semaines d'arrêt maladie, j'espère que tu t'es bien reposé parce que t'as du chiffre à rattraper
Lohan : C'est le comble de la feignantise
Andrea : Du chiffre, du chiffre, voilà le maître mot
Lohan : Il serait bien que tu essaies de trouver un poste ailleurs
Andrea : On a supprimé votre poste, allez à l'espace développement
Lorna : C'est la logique business qui commande
Lohan : Si ça continue, on va vous enlever les pauses café
Lorna : Tu ne prends pas assez d'appels à l'heure
Lohan : Et ça fait combien de fois que tu vas aux chiottes là ?
Andrea : Tu prends trop de temps au téléphone
Lorna : Y en a plein des comme toi qui seraient contents d'avoir ta place
Andrea : T'as pas fait ça, tes dérangements reviennent, tu n'es pas bon
Lohan : On ne peut pas garder ton poste
Andrea : T'as rien à faire ici
Lorna : Là c'est même plus de l'incompétence...
Andrea : Les Assedic, tu connais ? Ben ça va venir
Lohan : Qu'est-ce que t'as, t'as tes règles ?
Lorna : À toi de te débrouiller
Andrea : T'as qu'à changer de service ou de boîte
Lohan : Ne t'imagine pas finir ta carrière ici*

*Lorna : Vous avez du travail, ne vous plaignez pas
Andrea : On n'a plus besoin de toi
Lohan : C'est ton bureau ça ? Y a plus de bureau
Andrea : Tout ce que tu sais faire c'est faire des histoires
Lorna : Open space, on t'a à l'œil
Andrea : Tu es la plus mauvaise de tout le plateau
Lohan : Je te ferai partir de gré ou de force
Lorna : Par la porte ou par la fenêtre
Lohan : Tu pourrais pas faire un petit effort et être présentable ?
Andrea : De toute façon tu t'entends avec personne
Lohan : Mais elle est vraiment débile celle-là
Andrea : Attends, t'as fait des études toi ?
Lorna : Personne peut te saquer dans la boîte
Andrea : Et le rasoir, tu connais ?
Lohan : T'es pas rentable, qu'est-ce que tu veux
Lorna : On a pas le choix ça vient d'en haut
Lohan : Et la photo de tes gosses tu te la gardes à la maison
Andrea : C'est ça ou on met la clef sous la porte
Lorna : Bougez-vous, il faut faire vos objectifs
Andrea : T'as dormi cette nuit ?
Lohan : Hé connard c'est à toi que je parle
Lorna : Arrête de faire la gueule
Lohan : Ça m'étonne pas que ta femme t'ait quitté
Andrea : C'est quoi ça, c'est du travail de feignasse
Lohan : Va falloir faire des heures sup' si tu veux pas dégager
Lorna : Tu t'en fout, le client tu lui vends le truc, même si tu sais qu'il n'en a pas besoin
Andrea : T'as vu ta dégaîne ?
Lorna : Et ça se trémousse, et ça se trémousse, et ça bosse quand ?
Lohan : Tu vas pas me dire que t'es enceinte en plus
Lorna : On n'a plus besoin de toi, c'est pas qu'on a un problème avec toi
Andrea : T'es le plus mauvais, le plus nul au centre
Lohan : Tu sers à rien
Andrea : T'as vu tes chiffres ?
Lorna : Non mais t'as vu tes chiffres ?
Lohan : Vraiment, t'as vu tes chiffres ?
Ensemble : T'as vu tes chiffres ?
Lohan : Vous ne vous suicidez pas assez à France Télécom
Andrea : Vous devriez faire partie du lot
Lorna : Ça c'est sûr*

Le recours au théâtre a été utilisé dans un atelier autour du lien entre nombre et violence organisationnelle. Le dispositif était conçu en trois temps : ressentir, exprimer, comprendre. Il démarrait donc par les performances théâtrales dans le but de faire ressentir cette violence aux participants de l'atelier; la violence étant considérée comme une notion qui s'éprouve. Cela a été le cas aux dires des participants mais aussi comme en a attesté un lourd silence de plus d'une minute qui a suivi les performances. L'idée initiale était ensuite de susciter des partages d'expériences relatifs à des expériences de violence organisationnelle, par exemple en relation avec des formes de management liées au *publish or perish* bien connu des chercheurs. Cela n'a pas été le cas. Par contre, les performances théâtrales ont suscité des réflexions sur nombres et violence d'une grande profondeur mais aussi d'une grande pertinence, à ce que nous pouvions en juger à l'aune de nos recherches sur le sujet. Seulement en conclusion de cet atelier, un cadre analytique a été évoqué et mis en résonance avec les propos des participants et avec les scènes de théâtre. Même si le dispositif Ressentir, Exprimer, Comprendre a suivi un déroulement différent que prévu, notamment en matière d'expression, il a permis de mobiliser émotionnellement et intellectuellement les participants de manière très intense et de leur faire comprendre par des biais différents l'importance de ce sujet encore insuffisamment étudié.

RÉFÉRENCES

Kilby, J. (2013). Introduction to Special Issue: Theorizing Violence. *European Journal of Social Theory* 16(3): 261-272.
Costas, J. and C. Grey (2019). Violence and organization studies. *Organization Studies* 40(10): 1573-1586.
Lévinas, E. (2012). *Autrement qu'être, ou, Au-delà de l'essence* (Vol. 54). Springer Science & Business Media.

Questions surrounding who is and is not considered sane have long been sources of anxiety, fear, dread, and disgust, while such questions are often delegated to and toiled over by service workers, philosophers, and fiction writers or those with lived experiences. Amid this debate, many individuals lack tangible tools to maintain their own mental, emotional, and spiritual well-being in the face of dehumanizing social systems. Confronted with a persistently mad world, what is meant by and what is the purpose of madness (or a lack thereof)? Many of us are poised to affirm historic narratives around what constitutes sanity that have been inherited from history, but nonetheless negatively impact us all. This has become all the more clear amid multiple ongoing global pandemics. Poetry provides a unique medium for both confronting and redefining the ways in which such narratives persist in our practices and lived experiences.

Further, poetry provides opportunities for introspection, critical self-reflection, and radical witnessing; it has the potential to propose new ways of being in the world, framing suffering as open to play, and inciting empathy more viscerally than traditional therapeutic modalities. Through the following creative protocols, Autistic social worker, spoken word poet, and performance activist Steven T. Licardi has lead attendees through explorations of our mental health and offers various poetic techniques designed to build a more loving relationship with ourselves and our lived environments. Throughout these explorations, participants familiarize themselves with such techniques – including erasure/blackout, letter writing, list making, the exquisite corpse, and the golden shovel, among others – as a means of empowering individuals and communities to subvert historic narratives. These performance-lectures pull from Steven's own lived experiences as a patient and a practicing clinician, using poetic tools appearing in his second collection of poetry a billion burning dreams (STL, 2018) and other works. Participants are typically asked to come prepared to co-create and to reflect using pen and paper. Though Steven's workshops focus on creative writing,

they also make use of additional means of creative expression, such as memes, collage, and tableau. Each workshop represents a call-to-action, uplifting the power of poetry as a form of actionable love to positively impact social policies and to reshape systems of mental health. At the beginning of each offering, Steven invites those present to take three breaths: the first seeks to ground participants in the present and invites them to accept who they are in this moment. The second invites those present to co-create a loving, shame-free space for exploration, and a “willingness to be disturbed” (quoting writer Margaret J. Wheatley). On the third breath, attendees are invited to embrace kind failure and compassionate confusion; to access silliness and playfulness in their journey together. The first opportunity for individuals to engage with this playfulness is when they are asked by Steven to identify a struggle they are experiencing or a change they are seeking to make in their life currently. This is done in silence and the exact struggle or change is not revealed to the larger group. Instead, participants are asked to envision or imagine this struggle/change as an embodied being or creature. Examples might include a ball of metal spikes or a tornado made of eyeballs or an eight-foot tall platypus in yellow suspenders. Steven encourages these embodiments to be as absurd or ridiculous as participants can fathom. Each person is then given the opportunity to introduce the workshop to their being/creature, being as specific or vague as they feel comfortable. Following from this, attendees transition into a list writing exercise, where they are given time to compose a list of as many things they can think of that they love about this being/creature. This exercise begins the process of shifting our thinking about the one's relationship to their struggle or change, and to see if that relationship can be rooted in love instead of conflict, animosity, and hostility. Steven then introduces attendees to specific creative writing tools and discusses their clinical, scholastic, political, and personal applications. Firstly, Steven presents examples of erasure/blackout, a technique he uses throughout his work as a clinician and an activist. Though not exclusively literary, erasure/blackout takes a pre-existing text and excavates or reveals a poem by scoring out or otherwise obscuring certain portions of that text, while preserving others. Erasure might take the form of cutting out individual words, sentences, or phrases with a razor blade, dissolving them with acid, burning them, or otherwise destroying portions of the text. Though blackout often involves the use of black ink, it can make use of any color, with paint, collage, paste, crayon, even blood used to obscure the text beneath, but nonetheless leaving it intact.

Steven shows how this approach can be used on novels, research papers, journal articles, clinical notes, medical charts, standardized measures, online reviews, social policies, depositions, street signs, church gables, and even other poems. Further, Steven discusses their use in presenting research data, evaluating not-for-profit mission statements, subverting patient-physician relationships, communicating social policies, and so on. These applications are further expanded on using other poetic tools throughout the workshop. Participants

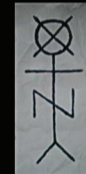
I See Poetry Everywhere, Creative Protocol

Steven T. LICARDI

1) Take a moment to think about something you are “struggling” with or a change you wish to make.*

1) Imagine this “struggle” or change as an embodied being or creature of your own design.

1) Describe this being or creature in the Chat with as much / little detail as you like.

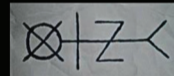


* Modified prompt from playwright Christina Quintana

1. Thinking about the creature/being that you have envisioned, what do you love about them/it?

1. Create a List of as many things as you can that you love about this being/creature.

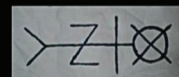
1. Consider: What about them/it are you thankful for? What do you appreciate about them/it? What about them/it brings you joy?



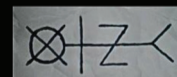
1. Moving from the List you created, we will write a Letter addressed to this creature/being.

1. Write a Letter (or a poem) starting with the words, “Dear _____.”

1. Consider: Maybe it is a love letter. Maybe it is a farewell letter. Maybe it is an invitation. Can it be all of these at once? How can we root this letter in love?



Call-to-Action!



1. Individual
Incorporate these poetic techniques into your own daily practices. Use them to engage critically with your own psycho-social-spiritual needs. Recognize them as practices in self-love and collective liberation.

1. Organizational
Use these poetic techniques to disrupt, disturb, and/or dismantle cultural norms in place that hinder the transformational work that might otherwise take place. Embrace kind failure and compassionate confusion. Complicate what has or has not been accepted.

Call-to-Action!

3. Collective
Use these poetic techniques to build community and momentum by engaging in empathic dialogue and vulnerability. Destroy notions of individuality and self-care to embrace collective-care and solidarity. Root into new ways of being and becoming in the world. Engage in world-building. Imagine the impossible.



then return to their list and are invited to compose a letter addressed to their embodied struggle/change. Steven invites attendees to address their being/creature directly, and to root this letter in love, whether it is a farewell letter, an invitation, a love letter, or otherwise. Participants are given several minutes in silence to compose their letter, and are reminded that whatever is written is perfect and precious. Steven then begins introducing additional poetic tools, starting with mixed media collage and visual art that include poems that have been cut out and reincorporated. This can be done on canvas or another base, and can include other ephemera, such as bits of porcelain, magazine clippings, colored paints, pastels, and so forth. Next, Steven discussed concrete poetry, which involves arranging the poem in the shape of what the piece is about. An example might be a poem about time that takes the shape of a clock. Though conceptualized as concrete, they can also be rather abstract in nature, evoking metaphor, analogy, and interpretation. Steven offers further examples of this, including the ways in which it can be combined with erasure/blackout. Next, Steven briefly discusses code poetry, which uses the emergent language of computer coding to construct poems. Steven offers one such poem, a kind of love poem exploring the complexity of emotion at the margins between romance and loneliness.

Code Poem a

x = love ;

While (relationship == romantic) {
} want > need ;

If (alone == true and x -- 0) {
} guilt ++ ;

}

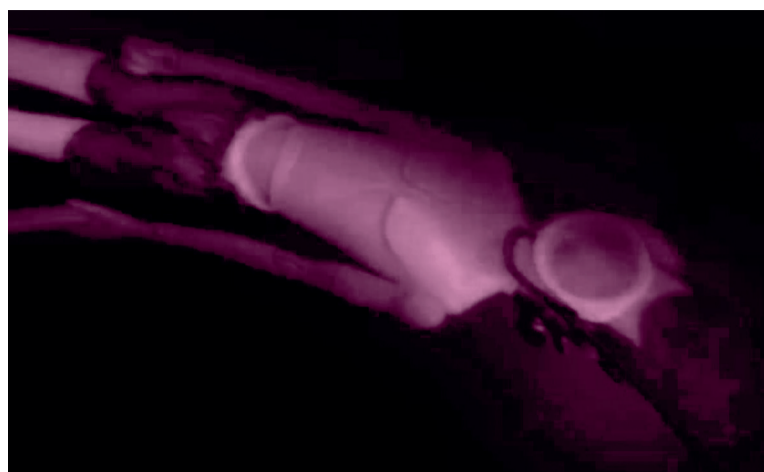
Though somewhat esoteric, when code poetry is done well, the poem can (rarely) be used to run a functional computer program. Here, Steven turns to infographics, charts, and visual aides, and the ways they can be subverted using the power of poetry. One such infographic see the instructions on how to wash one's hands replaced by the lines of a poem. Given that such infographics are ubiquitous, yet often fade into the background of hospital wings, doctor's offices, community-based treatment facilities, government offices, and so on, poetry has the potential to jar them back into relevance and our conscious consideration. Further, Steven is quite fascinated by the phenomenon of memes and their ability to comment on and disseminate cultural norms, particularly around mental health. As such, Steven is interested in their intersections with notions of wellness and madness, and here offers several examples, both serious and humorous. Before diving back into writing, Steven offers up one other poetic tool: the anagram.

Poets have employed anagrams in their work for centuries, but here Steven explores how playing with anagrams using everything from job titles to business sectors to mission statements to policy titles to diagnoses can create opportunities to reevaluate systemic intentions and to get curious about what is meant by such titles and labels. Participants are then invited to return to their writing practice. Looking at the letter that they have just composed, Steven invites attendees to perform an erasure/blackout on the letter, in essence using their own words. Attendees have the choice to either boldly erase their words on the page or simply transcribe the erasure/blackout on another sheet. Participants are given several minutes to do this; they can perform as many erasures/blackouts as they would like in the given time. Steven encourages participants to not think too much about this process, and to instead focus on what words are popping out at them and to let their choices be guided by their emotions in the moment or intuition. An optional component at this juncture is another writing exercise, which Steven chooses given the type of audience, their level of engagements, and the time available. Known as the golden shovel, this technique involves combining or incorporating one poem, text, or phrase into another poem, such that each word of the original poem

becomes the last word of each line of the new poem. Here, Steven invites participants to incorporate each word of their erasure/blackout into a new poem, taking several minutes to complete this. At the close of each workshop, regardless of whether or not the golden shovel has been used, Steven invites attendees to contribute to one last poetic work. Historically known as the exquisite corpse, but sometimes referred to in modern times as a community poem or crowdsourced poem, participants are invited to contribute one line, word, or phrase from any point in their writing throughout the workshop to be incorporated into a single collective poem. The randomly generated poem represents the journey each participant has taken with one another's individual and collective struggles/changes. The poem then is an object of shared ownership; everyone possesses an equal right to the poem as a whole. The workshop then ends with a debrief, which often includes a question and answer component. Participants may also share what they have written, if they so choose to. Of note here is that participants will often refer to their struggle/ change as a monster. Steven is intentional around not using this language throughout the workshop. The debrief creates an opportunity to explore why our struggles or the changes we wish to make in our lives are often referred to or framed as monstrous or somehow negative. Certainly they are not always pleasant. Indeed, they can often include a great deal of suffering, but by reframing a struggle/change as a relationship, one that we might choose to root in love, our notions of mental health and madness, which are often socialized as negative, we begin to pave a new path forward and expand our awareness of what is at the root of our suffering. Poetry is a powerful tool in this regard and it has the potential, not only to reshape our own personal practices and relationships, but larger social and political systems we are a part of. In closing, let us return to Steven's offering of this creative protocol as a call-to-action. In an individual sense, you are invited to incorporate these poetic techniques into your own daily practices. Use them to engage critically with your own psycho-social-spiritual needs. Recognize them as practices in self-love and collective liberation. From an organizational standpoint, Steven invites you to use these poetic techniques to disrupt, disturb, and/or dismantle cultural norms that hinder the transformational work that might otherwise take place. Steven invites you to embrace kind failure and compassionate confusion; to complicate what you have or have not accepted as unchangeable. Lastly, in a collective sense, you are invited to use these poetic techniques to build community and momentum with others by engaging in empathic dialogue and vulnerability with one another. Destroy unnecessary notions of individuality and self-care to embrace collective-care, solidarity, and collective liberation. Root into new ways of being and becoming in the world, engage in world-building, and imagine the impossible. Together.

The Fish Project, Augmented

Chris WILMOTT
& Robert FRED



“Climate communication often lacks the kind of narratives and metaphors that engage people in climate action and relates climate change to their personal lives.”

Roosen L.,J., Klöckner C., A., & Swim J., K. (2018), “Visual Art as a way to communicate climate change: a psychological perspective on climate change-related art,” *World Art*, Vol 18, No 1, 85-100.

One

1 Billion People
... will be at risk from coastal hazards such as flooding by 2060 .

Sea level 1 foot higher
Manhattan
then Rostock, Hamburg, Venice, Dunkirk, Calais, Belgian Coast, Netherlands Coast, etc.

Moving HOME
survivability
Salt in the drinking water
Sewage in the kitchen
Changing habits means changing habitation
SDGs mean Adaptation Goals

Trees Travel
to find new homes:
Atlas of Artificial Intelligence

Tell stories
That's what art does
Story telling causes Paradigm Shifts

No art will change the world
People change the world
Art changes how people think

TransGeneratives2030
There is no vaccine for SDG, for war, for climate change
Produce a Vaccine for Paradigm Shift Thinking

Art categories do not matter

Motivate from the ground up
How?
through the impact on personal lives
Paradigm shifts in the way lives are lived

UNESCO Chairs
How will you tell your story in ART?
Paradigm shifts in the way you tell your stories

Women and children
How will TransGeneratives2030 produce paradigm shifts for them?

My work
Art intersects science
Combined they advance creativity
Creativity advances sustainability
Does mystery have to be explained ?

Two

My research develops a visual language for the rising sea levels of climate change. I make pictorial images. Apprehending a visual image is one thing. Comprehending a visual image is another. Perception of a visual image requires apprehension and comprehension, both turning into understanding. Invoking emotions. I intend, without apocalypse, to convince my audience about the impact of rising sea levels on personal lives and heritage. That new paradigms for society arrive because of climate change. What - to us - is normal changes to be abnormal for us in our time, but this new abnormal is normal in future generations. This new normal is surreal to us. Surrealism is embedded in climate science visions of the future, foretelling a new normal that is abnormal. To match this, new paradigms for visual language are needed. If the world is going to change, so must art, as always it does, to reflect temporality. I merge into a new reality the terrestrial and undersea

worlds, requiring the audience to suspend belief, to picture themselves underwater, submerged, with fish or fish living in the terrestrial. With heritage lost to the sea. Inviting the audience to translate their emotions about these narratives and metaphors into climate action.

Having created paintings, I transition them into poetry, puppetry, video, and other media.

Making a new type of mixed media collection. Inviting artists to collaborate in searching for an abundance of narratives and metaphors. To picture themselves as storytellers to their artistic peers, exploring a new visual culture. Inviting marine scientists to collaborate in the same search, picturing themselves as storytellers to their science peers, exploring new approaches to outreach. There are untold possibilities awaiting discovery, for influencing positive social change. Including the development of blue humanities. Experimenting to find new stories to tell, all of which have their root in climate science and water. Which are roots also of sustainability goals #6 clean water, #14 life below water, and #15 life on land.

Three

- What can art and artists do to bring about the change?

- To have art make an impact in the real world is the objective of TG2030. Surrealism has shown how a disoriented world could look like. Now what we have been considering the norm is a disorientation we self-impose. Reinterpreting what is normal needs to be surrealized.

- The art object doesn't do anything. What is important is what people talk about the objects. Triggering the imagination, starting discussions. Art is a tool to activate people starting thinking in person, mobilization and discussions.

- Going beyond art objects to art instincts (see the book Art Instincts), skills, are bigger opportunities, not to put responsibility on ordinary people's shoulder, but to turn them to extraordinary actions.

- ...an exquisite corpse.

- Be careful about artists versus ordinary people. Every person is an artist.

- Isn't art subject to the influence of technology which distorts the meaning or feelings conveyed?

Four

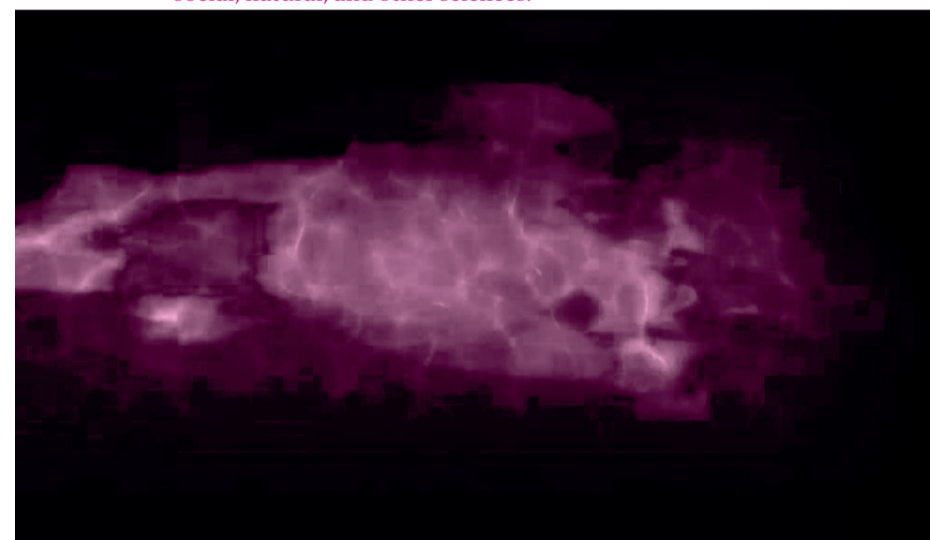
The role of art in the achievement of Sustainable Development Goals:
· A purpose of art is to change the way people think. And to communicate emotion.

· Art challenges the way people think by juxtaposing the absurd with the rational, the normal with the abnormal, surreality with reality, since such are the contrasts invoked by science visions of changing climate. Whether in the temporality of the past or the future.

· Art is a tool for changing minds. For invoking emotional action.
· These tools are for use by professional people, ordinary people, people, and citizens, in the achievement of Sustainable Development Goals
· They change paradigms for explaining the desirability of Sustainable Development.

Goals and for education about the direction of human travel.
· Creating paradigms to link Sustainable Development Goals to blue humanities.

· Encompassing Western and non-Western views of the human condition.
· Because art is inclusive, diverse, participatory and art integrates with social, natural, and other sciences.



a puppet story video

Five

Circular Economics are symbolised by circles. Circles stand for bubbles, trillions, trillions, and trillions of \$\$\$, balls, the O of oxygen, the O or H2o, the moon, eyes, and other motifs in my work. There are connections here to explore for finance.

Six

Shopping List: intentional augmentations of my work, after feedbacks from the conference.

Individual
- Decide how to make exhibition proposals to the Statue of Liberty.
- Invite Jean-Claude Dunyach to write scripts. (See p. 20)
- Decide how to explore surrealism in art, climate science and mathematics (finance).
- Decide how to complete my research proposal.
- Read, for links to personal lives, Eugene Linden's Fire and Flood
- Consider how to contribute/partner/relate with ICN-UNESCO chair.
- Explore further performance and music collaborative transitions. As well as print making transitions.

Organizational

- Decide how the Trans-Generatives network should promote itself to Climanosco; UN Decade of the Oceans; Foundation Prince Albert II de Monaco; ArtAsiaPacific, etc.
- Define how international learning - by people, professionals, ordinary people and citizens (and children), is led by artworks.
- Explain everyday practices in terms of personal lives that are not designed.
- Differentiate science from technology and art thought from thinking.
- Explain temporality in sustainable development, in changing visual culture and culture change.
- Create Sustainable Development Visual Culture.
- Use art to connect governance to people.

Collective

- Explore bubble workshops, for finance, fishing corporations & fishing cities, connecting ordinary people, professional people, people, and citizens in Brisbane, Boston, Boulogne sur Mer, Copenhagen, Hiroshima, Leticia, Pontevedra, Portugal Said, Reykjavik, Trømso, Venice, etc.
- Find storytellers in art, science and functional realities.
- Create an open source data bank of Trans-Generatives "definitions."
- Explain ethics of personal lives in Sustainable Development Climate Justice.
- Create involvement with inclusive, diverse, and participatory contributions from ordinary people as well as from social, natural and other sciences.
- Pursue the upside down.
- Explore connections between Circular Economics and Circles for bubbles, trillions, trillions, and trillions of \$\$\$, balls, the O of oxygen, the O or H₂o, the moon, eyes, and other motifs.

Arts-based Eco-social Pedagogy in Educational Settings: How to Help Future Generations Shape a Better World?

Taina De CARVALHO

"Freedom is where you can be totally yourself."
"When I am quiet, I can think clearer."
"Cooperation is the source of peace."

Excerpts from the book *Life Recipes*, free translation from Finnish.

The global situation continues to worsen despite years of warnings about environmental and societal problems. As of right now, it is well established that the crisis is closely tied to human activities and the ways in which humans inhabit the world and relate to it, but the current crisis is too often narrowed to climate crisis, when in fact, humans are faced with much broader and deeper challenges. It is reasonable to claim that the world is faced with an existential dilemma, where a dichotomized worldview prevails, and nature has taken the place of otherness. What does it entail to be human and to inhabit this world?

As efforts to create international agreements for environmental preservation, environmental education begun to develop, especially since the Stockholm declaration was presented in 1972. But significant gaps between education and sustainability remain to this day. Environmental education, which was long applied through theoretical lens, failed to initiate the very transformation needed in value systems and worldviews, and is still struggling to find pathways to reach students. The challenges are high and overwhelming; instead of educating students about the environment, the focus should be on fostering an emotional connection with the world they belong to and a sense of the interconnectedness of all things. It is an ontological issue that necessitates finding new paradigms and meanings.

However, the society that children are growing up in, particularly in western nations, is already very urbanized, digitized, diminished in wilderness and poetry. Referred sometimes as being part of the "indoors generation," those children are unaware of the losses that have occurred and their costs at a global level. The world they live in is the true world for them and their preoccupations are elsewhere, which increases the challenges of educating for transformation. However, a new culture that draws from climate anxiety and seeks for new ways to exist in this planet has begun to emerge, particularly among young people, through new diets and fashion trends.

Nevertheless, this change is not yet significant, and at a global scale, the society is experiencing a crisis that is also a crisis of culture, imagination, and senses, in which there is a desperate yearning for beauty, relationships, existential meaning, and belonging. Here the arts have an essential role to play, as they can raise our eco-social and aesthetic consciousness. Indeed, society must be given the opportunity to change paradigms with an inspiring new model, and the arts can instigate profound transformation in individuals and cultures.

By blending emotional and cognitive knowledge and immersing children holistically in the learning process, arts-based educational approaches can encourage children in rethinking their ethical selves in connection to the non-human world, promoting responsible and meaningful agency. Furthermore, used in a classroom, the art process may help children find a common understanding. On a global scale, it is crucial to find consensus in regard of the crisis. What will occur largely relies on the choices we make. We should weigh our current desires against what we already know must be done.

How can we support children education towards it?

Eco-social education has officially entered the Finnish primary school curriculum to promote change from our current environmentally burdensome lifestyle to a more sustainable way of life. We focus too much on social issues while neglecting environmental ones. Reconciling and reuniting those concerns as they intersect is the goal of eco-social work, by raising pupils' awareness that they are part of the web of life and by helping them to rethink their relationship with the world, they may be able to re-imagine the future. Re-aestheticizing daily life, re-stimulating the senses, and re-becoming an intrinsic part of the world appear essential for being able to do so. However, eco-social education is left up to the teacher's own knowledge, comprehension, and willingness to fulfil it, which poses considerable difficulties and greatly increases the likelihood of failure.

With new academic programs designed to foster inter-disciplinary collaborations and increased field research, Finland is a leader in the disciplines of cultural well-being and the application of arts-based approaches to social and health fields. Indeed, in 2012, I was able to use my expertise from art and art therapy fields and started to develop an arts-based eco-social pedagogy, which has been used in the school system of several Päijät-Häme region schools in Finland, in collaboration with teachers.

The purpose of the study was to investigate the possibilities of the approach as a part of the school system in response to the global crisis and as way to fulfil eco-social education, by exploring how a phenomenological arts-based approach can increase in pupils a sense of connectedness with the web of life, nurture eco-social qualities in them and encourage peaceful action.

Implementing the method in school setting encourages redefining the educational field in relation to the world's situation and thereby enabling the unfolding of a change. Cultivating the well-being and mental health of the pupils, seen as crucial to be able to create sustainable communities, are also at the core of the study.

Arts-based eco-social pedagogy is an empathy-generating approach that answers the challenges of education and society by increasing pupils' eco-social skills, well-being and aesthetic concern and awakens sensitivity. It is a creative, polyaesthetic, multimodal and multi-sensory method based on expressive arts therapy and phenomenology. Arts are used as a bridge by which dialogue is created between self and life phenomena and as a mean of exploration and form-giving. It is called Poiesis, the inherent nature of the arts for bringing-forth information, a way to know by making. Participating in this process allows a new kind of knowledge to emerge from the experience and the

innermost of the participants, which again interacts with the phenomena through aesthetic response. The process allows also pausing and exploring our –being-in-this-world–: the way we are in this world and to imagine how we could be in this world.

In practice, the method provides students with a safe and specific framework to come together to explore life phenomena with the use of arts. As an educator, my task is to provide them with a space that would allow this kind of working. The space is not just any space, but what is called a liminal space, one in which we come from our everyday life, and from where we leave, changed. The liminal space is a space of possibilities, of exploration, in which one is free to invent new forms of being and meaning, and harvest epiphanies to the daily life. In this space children may learn to look at life phenomena through a phenomenological lens, by connecting to them empathically and refraining from judging them. The new cultural experiences may lead to new understandings and insights on what it is to be human, on society and the more-than-human world.

During the process, children get to investigate important life topics while being holistically involved in the process. The sense of belonging and connection between students and the teacher is strengthened. Participants become visible in the whole of their being and are accepted just as. The gained understanding and appreciation of the diversity and preciousness of life encourages acting accordingly. The strength of the method is its holistic nature, which also gives participants an understanding of aesthetics, develops their imagination, critical thinking, and supports academic achievements, while preventing exclusion, reducing bullying and detecting pupils' potential personal challenges. Such a life-based philosophy of education would be needed in the school curriculum and in changing culture.

How it works?

ARTS-BASED ECO-SOCIAL PEDAGOGY happens in the school time, in the classroom. The teacher is participating and involved. The process can lead to an artistic outcome (performance, book, exhibition...).

Happens during a ten-week process, once a week with one group for a two hour class.

Starting from the person, group, moment, it aims at finding a common understanding of the world while embracing simultaneously diversity. When creating cultural and arts-based projects related to the eco-social issue, multidisciplinary collaboration is required. It is about life phenomena exploration with arts, being present here-and-now, and recognising the authenticity of the experience of being.

The process:

Well-being →	Connection →	Impact
Creative	To oneself	Positive
Balanced	To others	Responsible
Critical thinking	To the-more-than-human-world	Ethical
Sense of belonging	Dialogue	Aesthetic
Recognition		
Meaning		

Case study: "Elämän reseptikirja" (Life recipes book project), ed. Pieni Karhu, 2019

"Do you want to know about love? Do you want ingredients and instructions for eternal friendship, or for example for dreaming? In this book, you will find children's own instructions for various situations in life. Life's recipe book is a fun and touching book about important topics for children. It is a treasure chest of stories that opens up to the reader like a good friend. "Freedom is where you can be completely yourself."

More than twenty children have participated in writing and illustrating the book. The completion of the book has been carried out through arts-based eco-social process.

The main goals of the Elämän Reseptikirja project are to promote empathy and develop interaction skills. It has

allowed children to stop to reflect and explore things that are relevant to them. The book also gives adults a new perspective on children. With the help of the book, both adults and children can learn to understand themselves, other people and life better." (from page <https://tainade-carvalho.wixsite.com/portfolio/elämän-reseptikirja>)

Research Method

Phenomenological approach:

- Exact description without any infiltration: Bracketing
- Stay with the experience and phenomena
- Identify the characteristics of an experience at a given moment in time
- Unfold a knowledge that comes in an unpredictable way (also through art works)

Data collection: harvest

- Open discussions
- Teacher interview
- Observations
- How the process has affected the participants: how we started, and how we ended

Findings

Meanings are co-created with the participants. Two complementary lenses were identified: how the approach generates understanding of the subject and how the approach affects participants in relation to the subject and in regard to the environmental issue. These findings deepen our comprehension and shed light on the field's potential future directions.

Summary of outcomes

1: The students' wellbeing is crucial for them to take in new knowledge and be fully involved in the creative process

The approach appears to provide appropriate framework for children which is safe enough to enable the working. It helps to identify student's personal challenges and needs and may answer accordingly.

It strengthens the bond between students and students-adults.

2: A meaningful experience.

Through the process, the children may find meaningfulness in the working and can personally relate to the working themes.

3: Active participation through a sense of responsibility
Children may become responsible agents

4: Creativity

Sense of curiosity, imagination, critical thinking may grow.

5: The process

The learning happens through a process of growth which may initiate transformation (on a personal and group level): More empathy

More imagination

More joy and well-being

Better classroom dynamic

Stronger bond

Unexpected outcome: better academic achievements and concentration skills

Feedback from children

"I learned to fly with my imagination."

"I learned to be with others."

"I trust myself more and I dare to try."

"The most important was to be accepted just as I am."

"I learned the importance of friendship."

"I learned to be more reasonable."

"I learned to be happy about the people around me."

"I value now patience and peace."

Conclusion/Discussion:

Arts-based eco-social education has had positive impacts in the primary school settings where it was implemented, because of its extremely flexible nature, which adapts depending on the situation and the participants, and its empathic approach. Furthermore, the playful, allowing and accepting atmosphere of the framework, which strengthened

relationships among participants, enriched the process. Children enjoyed being involved in an existential inquiry, using creative methods, which was different from their daily school lives.

However, it is interesting to note that it is highly unlikely that such benefits would have aroused without the offered framework. Being able to reflect with co-participants while being consciously and actively involved in a working process play a significant role.

Studying the method's long-term benefits might be useful. It is difficult to understand long-lasting changes that happened in the participants without a longitudinal study, though some teachers have altered their working procedures and routines in response to the process's results.

Part of the challenges is how the teacher accepts me and the new approach in the classroom. Teachers have had a tendency to censor children's artworks and creative processes, by for example telling them how a drawing should look like or what is a right and proper movement in a movement workshop, which contradicts the approach.

Many children that start the process of arts-based

eco-social approach have substantial behavioral issues, or are struggling with apathy, which should be taken into consideration during the process, which may be extended over the ten-week suggestion.

To address the scope of the issues we are currently experiencing on a global scale, arts-based eco-social approach is not enough, instead educational institutions need to adopt a fundamental shift in perspective.

The concept of sustainable education appears to be calling for deep change at a time when educators and learners are already overwhelmed with too many changes and dealing with constant new information.

Teachers themselves should be involved in arts-based eco-social workshops in order to experience the transformative powers of the arts and gaining insights on the working implemented with children.

This development day was a significant step taken. Taina de Carvalho is a visual artist BA, art therapist and educator MA Creativity and Arts in Social and Health Fields. Metropolia University of applied sciences (2021-2022) - Painovoima association is a cultural wellbeing and ecosocial work developer.

Numerous initiatives are being carried out by local groups. It is time for the grassroots efforts to be recognized and for the bottom-up and top-down to meet, and necessary to conduct more research in the area of the arts and cultural welfare to support action. Local initiatives need to be supported by policymakers and stakeholders. Funding for project-based initiatives must allow and support long-term implementation. These policymakers and stakeholders must understand the arts' potential for this to happen. When discussing cultural welfare and when the field is being developed, the actual global context must be taken into consideration. From a global perspective, arts and culture are being seen as essential and must be reintegrated into the social and environmental debate.

REFERENCES

Abram, D. 1996. *The Spell of the Sensuous*. New York: Random House

Fancourt, D., Finn S. *What is the evidence on the role of the arts in improving health and wellbeing? A scoping review*. Copenhagen: WHO Regional Office for Europe; 2019 (Health Evidence Network (HEN) synthesis report 67)

Filipova, T., KopsiekerL., Gerritsen E., BodinE., Brzezinski B. and Rubio-Ramirez O. (2020) "Mental health and the environment: How European policies can better reflect environmental degradation's impact on people's mental health and well-being." Background paper by the *Institute for European Environmental Policy (IEEP)* and the *Barcelona Institute for Global Health (ISGlobal)*

Knill, P., Levine, E.G., Levine, S.K., 2005, pp.94-95: *Graphicadaptation* Knill, P., Levine, E.G., Levine, S.K., *Principles and practice of expressive arts therapy, Toward atherapeutic aesthetics*, 2005, Jessica Kinglsey Publishers, London and Philadelphia

Levine, S.K, E.G. Levine, *Foundations of expressive arts therapy, theoretical and clinical perspectives*, 1999, Jessica Kinglsey Publishers

1st Cultural Well-being Development Day, Finland

Following the conference, I communicated with Benno Werlen. The non-profit association where I work, Painovoima, in cooperation with Arts Promotion Center Finland TAKE and the Regional Council of Päijät-Häme, organized the first cultural well-being development day for the Päijät-Häme region in Finland.

The program for the day was launched from a broader global perspective and we moved towards national, regional, and local grassroots efforts. There were a lot of impressive presentations during which we heard e.g. from Benno Werlen, UNESCO

Chair on Global Understanding for Sustainability and initiator of the Jena Declaration, and a great lecture on the significance of cultural well-being from Arto O. Salonen, Professor of Social Pedagogy and Sustainable Well-Being from Eastern Finland University. We also heard how cultural well-being models have developed elsewhere in Finland, such as Taiku sydän and Taiteen Sulattamo, which serve as excellent models for us in the Päijät-Häme region.

Following the presentations, we had time throughout a workshop to brainstorm development ideas: how could we develop cultural well-being in Päijät-Häme relation to eco-social sustainability and 2030 goals?

This development day was a significant step taken.

Taina de Carvalho is a visual artist BA, art therapist and educator MA Creativity and Arts in Social and Health Fields. Metropolia University of applied sciences (2021-2022) - Painovoima association is a cultural wellbeing and ecosocial work developer.

School Lunch 2050

Maximilian SPIEGELBERG, Steve Mc GREEVY

FEAST: LIFE worlds of Sustainable Food Consumption and Production: Agrifood Systems in Transition. Five year inter-transdisciplinary project (2016-2021)

Imagining desirable visions of the future that galvanize support and build consensus is critical for catalyzing social change for sustainability. When visions of the future are contested, the forms and targets of future visions, and the underlying knowledge types expressed and activated by future visions become important factors in determining which visions "stick" in the social imaginary. In this presentation, we explore the potential of affect and embodied knowledge in expanding our receptiveness and motivation for sustainable change through the School Lunch 2050 virtual exhibit (kyushoku2050.org) developed by the FEAST Project (RIHN). Food practices are unique in that they are intimately tied to our bodies—eating and cooking, for example, are sensuous experiences that can engage all five of our senses. Food is also embedded in our everyday lifeworlds, which would suggest that future visions of food and food practices are more tangible and easier to relate to when compared with futures with more abstract qualities. As part of the School Lunch 2050 exhibition, four lunch menus were conceived from four plausible future climate and food trade scenarios in the Japanese context. The four meals were then created using realistic looking plastic food often found in restaurant windows in Japan to entice hungry customers. The exhibit has been displayed at public events and, due to COVID restrictions, online. Through the exhibit, we argue that emphasizing embodied knowledge and affect as part of future visions can "persuade" the public in ways that overt appeals to logic and values cannot. We suggest that more research is needed on the effect of sensuous immersion in possible, desirable futures.



The four menus:

Global Green Illusion: Thai rice, Bali style chicken satay with coconut sauce, Favorite Idol Vegetable Canadian Smart Tofu, Russian Green Onion, Spicy Korean fish soup, Animal rights milk (flavor: purple yam), Coffee Jelly

Global Gamblew: GuGu Pan" Rainbow bread, "Bear & Bull" Nutrition noodles, "Salmo chan" lab grown fish sausage, "Bacon flavored CRISPR Bug Bits" instant soup, Upside down pudding with one whole strawberry, Soybean milk flavored medical cube, Supplements

Domestic Desperation: Glaberrima Plus Rice, "Autonoma soup" Fava beans, Tomato & fish filet, Engineering's finest Cricket Tofu Steak, Burdock Chips, Kyoto Banana, fruit mash dumplings with blueberry flavored sauce, Broccoli Sprouts, Kansai lent

Food Gardens: Potato & beans porridge, communal proteins (Grilled ayu fish or venison or bean mix falafel), Satoyama soup, Fresh salad mix, Roasted chestnut, Milk bubble

Special dishes:

"Gu Gu Pan" Rainbow bread; special summer colors now with extra much flavour

"Salmo-chan" fish sausage lab grown with the clean proteins

"Bear & Bull" Nutrition noodles. Made with the best blend of nutrients available on the market.

Soybean milk flavored medical cube. Dissolve the cube to dissolve the microplastics.

Bacon flavored CRISPR Bug bits instant soup. CRISPR bug bits are also available with "Cornsoup," "Tomato" and "Consommé" flavour!

Upside down pudding with one whole strawberry. ONE WHOLE strawberry today!

Supplements. Don't forget to take supplements to rebuilt your microbiome.

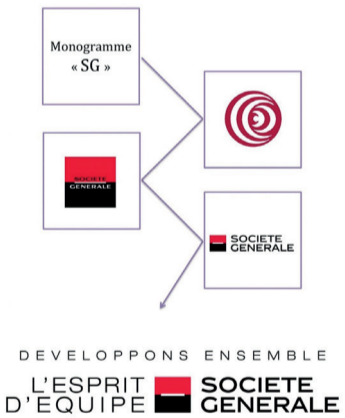
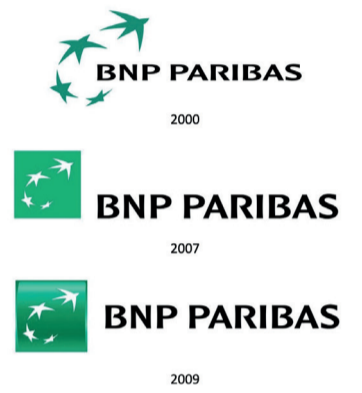
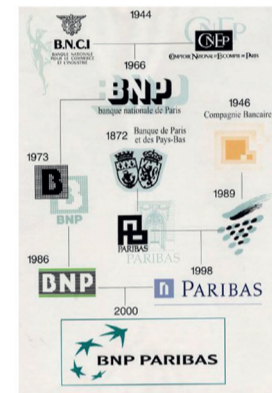
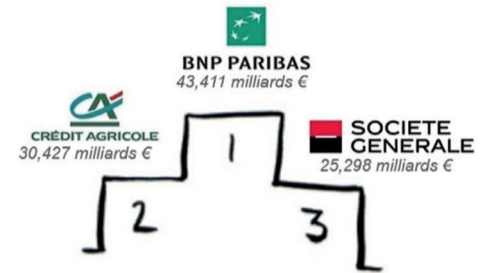
L'Art de l'éco-blanchiment : Les Couleurs verte et bleue dans le langage visuel des banques

Francesc RELANO

FRAMING THE RESEARCH PROBLEM

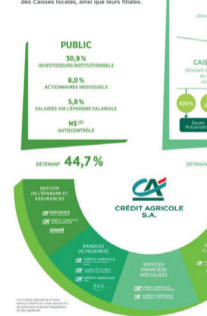
- There are two major types of greenwashing:
 - **Claim greenwashing** = uses of **textual arguments** that explicitly or implicitly refer to the ecological benefits of a product or service to create a misleading environmental claim (because of false claims, omission of information, vagueness, etc.)
 - **Executional greenwashing** = use (intentional or not) of nature-evoking elements such as images using **colors** (e.g. green, blue) or **sounds** (e.g. sea, birds)
- Most of research focused on claim greenwashing => Here focus in executional greenwashing, namely as regards colors and applied to the banking industry

Palmarès des banques par produit net bancaire (PNB)



Le Groupe Crédit Agricole

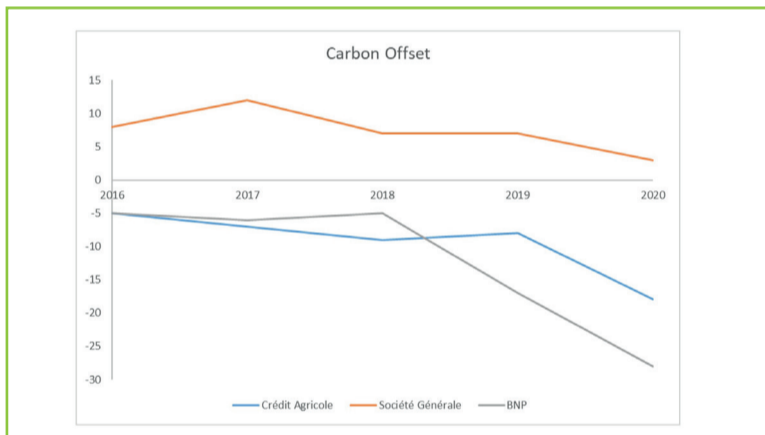
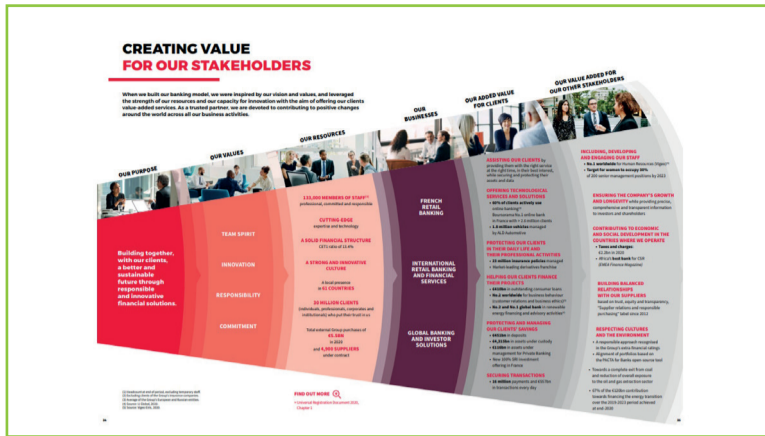
Le groupe du Crédit Agricole regroupe 33 caisses régionales et des caisses locales, ainsi que leurs filiales.



Un groupe solide, déterminé à soutenir toute l'économie

Après 100 ans d'existence, le Groupe Crédit Agricole est déterminé à soutenir toute l'économie, à travers ses caisses régionales et locales, et à accompagner les entreprises et les particuliers dans leurs projets.





CONCLUSIONS

- No real demonstrations (only one country examined, few examples, and all evidence shown not fully congruent)
- But one thing is clear: the color used by banks in their communication is becoming greener (more exhaustive content analysis needed).
- Greener attitude in communication does not mean, however, greener attitude in facts.

SCRIPTUM POST-COLLOQUIUM

- Depuis ma présentation, je constate que tout va bien. De plus en plus d'entreprises (et banques) passent au vert et vantent à tout vent leur engagement dans le développement durable. Dans le même temps, les rapports du GIEG se succèdent et nous disent invariablement que la planète va de pire en pire.
- Il serait peut-être temps de cesser de colorier les logos et les stratégies des entreprises dans tous les sens et intégrer les aspects sociaux/environnementaux dans l'économie plutôt que à l'inverse. On appelle cela la soutenabilité « forte » et c'est l'unique voie de sortie...

spaces, experiencing a variety of performances and stimuli. The idea behind applying this format to our collaboration was to provide audiences with a varied experience, introducing them to circular area development in the Binckhorst.

A neighborhood located to the southeast of the Hague, the Binckhorst is an industrial area in transition, as seen in its lingering cement factory and its greening and mixed residential ambitions. Its peculiarity is its experimental and visionary approach to development, whereby it strives to become a livable neighborhood in a circular way. But what does this entail? First and foremost, it is about abandoning linear economic paradigms that predominantly take-use-dispose of resources. A circular area development integrates alternative approaches to material flows, prioritizing reusing, repurposing materials, and closing the waste loop. The circular economy is often represented with a butterfly diagram with two symmetrical circles: one of them is technical, which consists of everything that does not biodegrade, like metals or plastics; the other circle consists of materials that do biodegrade, like food or wood, but basically everything that, if designed intelligently, will return to the soil. To be truly circular these two circles should be kept apart, or could be possibly taken apart after using them so that the biodegradable materials can return to the soil and the technical materials can be reused (MacArthur, 2020). So, for an area to be circular, it would need to correctly dispose of its waste and also use energy in a way that produces no waste or at least as little as possible. Next to the technical challenges, the transition to a circular economy requires people's awareness and behavioral changes.

Because of its pioneering approach to circularity on a wider geographical area level (a whole neighborhood), the Binckhorst and its development have become a topic of interest for a lot of stakeholders. The Parade through a circular Binckhorst introduces expert and non-expert audiences to the area's development, through an innovative way of knowing, experiencing, and reflecting on circular area development.



Parading through a Circular Area Development with Arts and Sciences

Amanda BRANDELLERO, Ellen LOOTS, Judith SCHUELER, Evelien VAN DEN BRINK, Emma DIJKHUIZEN, Jet SCHAAP ENTERMAN, Irmgard BOMERS, Marleen BUIZER, Ulrike HAHN, Josué AMADOR VALDEZ

Introduction

In recent years, there has been increased attention toward art-science collaborations. Such collaborations encompass a broad spectrum of activities, ranging from artistic projects informed by technology and scientific research and vice versa, to novel forms of inquiry and communication at the intersection of the arts and sciences, combining diverse forms of knowledge and imagination. While such collaborations are not necessarily new, their recent manifestations allow us to gain insights into how complex societal challenges might be approached through multi-actor and disciplinary partnerships.

One such example is the 'Parade through a circular Binckhorst', an art-science virtual happening that centers on introducing a circular area development initiative to a wider audience, through an immersive and cognitive experience. Due to COVID-19, this experience was designed as an innovative online event, with a dynamic format that captures the attention and engages the audience in a whistlestop tour of the Binckhorst neighbourhood of The Hague. The latest Parade took place as part of the UNESCO Transgeneratives 2030 conference program, on 28 March 2022. This contribution sets out the concept behind the Parade, evaluates its impact, and puts forward some recommendations for future art-science inspired actions.

Why set up a Parade through a circular Binckhorst?

The Parade through a circular Binckhorst is an event that evolved out of a collaboration between ACCEZ (an innovative impact programme on sustainability transitions for the South Holland province), the Rotterdam Arts and Sciences Lab (consisting of Erasmus University Rotterdam, Codarts, and the Willem de Kooning Academy), and Wageningen University. With this collaboration, the arts-science combination was embodied in the Parade from the very beginning.

The format of this event was inspired by theater festivals, where the audience can move across different tents and

Getting to know circular area development through a Parade through circular Binckhorst

During the UNESCO Trans-generatives 2030 conference, the Parade took place online. Through a combination of virtual plenary and breakout sessions, we made a link between the Binckhorst and the topic of circular area development, bringing together artistic and scientific practices. We will now briefly reflect on how each session added to the multi-sensory and cognitive journey through the Binckhorst.

Researching circularity in space and time

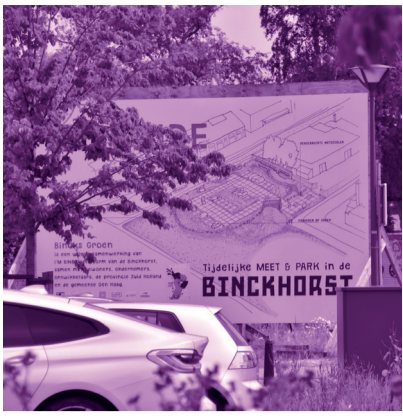
In her presentation, Marleen Buizer details the crucial roles of time and space in circular area development, illustrating her argumentation through a series of 'postcards' from the Binckhorst. Time is needed to explore the various circular options and opportunities, and to let them blossom and thrive. While transitioning into a very different shape, there needs to be space to develop ideas as well as implement tangible changes. 'Social cement' in the Binckhorst is also required to make a smooth transition.

Circular soundscapes

Josué Amador Valdez invites people to explore the Binckhorst through sound and perception. He recorded the acoustic environment of the Binckhorst to create a series of soundscape compositions that represent the area and its inhabitants. The audience was invited to close their eyes and listen to the place where the sounds were recorded. In this soundscape journey, the audience gets an insight into the social and ecological implications of sound. They end up under the water, and in a noisy repair shop for youngsters. Josué highlights that dialogue between all different voices, human and non-human, is important for an area to become really circular.

Visualizing circularity through shapes and color

Ulrike Hahn prompts the audience to close their eyes and think about how they would envision, firstly, linearity, and then circularity. Then, she shares how she has envisioned these concepts herself, through a series of paintings and illustrations, one of them alluding to the butterfly diagram that the Ellen McArthur Foundation uses to depict the circular transition. Ulrike plays with shapes and colors to visualize the linear and circular economy, and invites the audience to envision how things are and could become.



Stakeholder perspectives on experiencing and engaging circularity

Irmgard Bomers is a representative for the 'I'M BINCK' organization that aims to develop the Binckhorst in a transgenerative way into the most authentic and inclusive area of the city. She shows a short video about the Binckhorst Beings, which are signposts created by locals with local materials. They reflect the core values of the Binckhorst in the eyes of all main stakeholders: residents, representatives of the municipality, firms and more. Like other multi-stakeholder participatory experiences, such as Bincks Green and Bincks Future Makers, trust, time, and money - in that order of relevance - are needed to move towards the common goal.

Recommendations

The concept of the Parade through a circular Binckhorst has a lot of potential in the future. Back in the Mirror Tent, Judith Schueler, Amanda Brandellero and Ellen Loots reflect on where we can go from here. We here provide an overview of key recommendations we have drawn from our experience, so that they can be of use to others.

Engage!

Multi-actor and multi-disciplinary partnerships are key to making circular area development happen, and making it more inclusive. Art-science partnerships can enable collaborations across different stakeholder groups, opening up different communication and inquiry channels where diverse voices, perspectives, and expertise can be shared and integrated. It would therefore be valuable to see more interaction with municipalities, housing companies, residents, and business/factory owners of a developing area.

Seek balance!

The Parade was inspiring in terms of the collaboration between arts and sciences. What makes it work, is artists and researchers having an equal role in this. Art should not be an instrument for researchers, and science should strive for impact and connectivity through knowledge. Because the artists of the Parade are also connected with research institutes, this process went rather smoothly. Bringing in artists from outside could lead to new, interesting experiences.

Imagine!

What if the Parade were the starting point of circular area development, and not a way of engaging and communicating about it? The Parade would then become an occasion where people pitch their ideas for the different stages of the transition. Involving many different stakeholders in imagining the process from the start, could lead to lots of support and original bottom-up solutions for many small and larger issues related to the space, the built environment, the atmosphere, the visual outlook, and even the desired soundscape (think of birds or water, and ways in which urban planning can contribute to this). Josué Amador Valdez, researcher and composer explains:

"It would be interesting to do the opposite, to place the Parade at the beginning of the process. The Parade could be the starting point that enables space for discussion, collaboration, and dialogue, opening the subject to different people who could be interested, like local residents but also other artists or scientists."

Start!

Involving a multitude of opinions and visions from the start may require time and very strong curation and negotiation. Art-science collaborations such as the Parade can act as facilitator and eye-opening processes at the start of radical changes in people's (built) environment. The better these processes are integrated into any transition, the more influential they could become. One step at a time.

Activate!

The audience is not passive and entertains a dialogue with artists, scientists, and other organizers. No final products are being presented, but rather each session is the starting point for ideas, discussions, sonic immersions, and visualizations. There is no replication: each event can change shapes and formats. This can only happen through connection, interaction, collective imagining, envisioning, and engaging. Let the show begin!

Contacts

Amanda Brandellero:
brandellero@eshcc.eur.nl
Ellen Loots:
loots@eshcc.eur.nl
Judith Schueler:
judith.schueler@accez.nl

Sources

Ellen MacArthur Foundation. (2020, 12 February). Ellen MacArthur on the basics of the circular economy [Video]. YouTube. <https://www.youtube.com/watch?v=NBEvJwTxs4w&t=67s>
Images: Jet Schaap Enterman, Ulrike Hahn

Walking as Enacting Trans-Generatively! Experimental "Psycho-social-geological" Time-walk in Nancy

Notes on and Observations about Experiencing Deep Time during Walkshop

Wendelin KÜPERS

I fondly recall the experience as 'a walk with friends' among the flowers in the garden, and the chance meeting with sympathetic strangers.

The current narrative is presented as observations from the experience. It is a quasi scientific telling of our experience. In light of our preference for invoking action, what would we want people who read this piece to do? On the one hand, the whole embodied experience was very personal and subjective, but the walk was also a convivial friendship event. The walk mediated between those two. The walk was in "real time" but we tried to experience "deep time" - again we mediated the liminal space in-between.

One modest practical goal for us here could be to encourage, inspire or exhort readers to walk. We could point to the benefits of walking in nature as a meditation.

Paul Shrivastava

As part of the conference Trans-Generative 2030, this experiential and experimental exercise invited participants for an uplifting, deep time-walk.

Such time walk is a kind of transformative move, a journey through the temporal horizon (4.6 billion years as geologic timescale) of Earth history via an actual, interactive narrated 'promenade' that would cover this period in a ca 4.6 km walk.

In mindful, slow moves, a small group of participants were on the way, guided to walk and pause for sensing and learning about key events from Earth's evolution along a chosen pathway in Nancy, mainly in a nearby park.

The walk puts into spatio-temporal context(ure) the human and "more-than-human" rich ancestral heritage and gives an insight into the inter-connectedness of life, while also addressing the destructive impact and responsibilities of the human species is having in relation to an integral functioning of our living (planetary) world.

As such it was an embodied way of (re-)sensing, re-thinking and learning about planetary relationship. Concretely, and thereby implicitly contributing for a regenerative more convivial and sustainable living on Earth and ecological civilisation.

Realising that mere cognitive approach and intellectual understanding are inadequate for relating to habitat, habits, and habitus, the walk was a form of bodily engagement, of moving and being moved involves sensing and making sense. (It provided TRANSGenerating options, including realizing actions of non-doing that express "creative" responses).

"Deep time" refers to time anterior to human existence. Evolutionary, earthen landforms, minerals and other elements (air/gas, water, fire) emerged and were processed in deep time, predating human existence and thus a "subjective" observer. For geomateriality and minerality the human observer is as radically other than human, (stemming largely from their origin in the depth of time anterior to human existence and thus no direct human experience that captures these moments). This alterity of existence and life on earth is an alterity that is (not only before but also) "more-than-Human." But we human can get a sensing, a feeling for this earth's alterity and anteriority through our senses and reawakened elemental relationship. Element here refers to water, air, earth, and

fire as general "enfleshed" dimensions, and "midway between the spatio-temporal individual and the idea, a sort of incarnate principle" (Merleau-Ponty 1995: 139), thus a kind of emergentism of an elemental being and movement. This dynamic elemental texture of Flesh is neither localizable, as factual matter (i.e. material substance), and a collection of positivist facts, nor merely a mental representation, concept, idea or "Geist" (Merleau-Ponty, 1995: 147). On the one hand, Flesh is an element in the same way that water, air, earth and fire are, or have been understood to be, elemental. In its 'elemental' sense, it can be conceived as a surface of sensibility, a skin or fabric, into which 'en-Fleshed' sensitivities – the sight of our eyes, the sound of our ears, the scent of our nose, the depth of taste on our tongues and languages, the touch on our skins – are indivisibly interwoven or enmeshed. On the other hand, there is a coherence of particular fleshly beings with the general Flesh of the sensible world. As body and world are inscribed in one another the individual Flesh and that of the world are intertwined. The 'world is an extension of the body's Flesh, as the body is an extension of the world' (Low, 2000: 53). Beyond fire, water, air and earth, Flesh can be interpreted as a fifth mediating element; it is an element of experience, expressing a general principle that is as real as other elements – thus countless, heterogonous instantiations and that is at play wherever there are creatures that perceive. Using elemental carnal metaphors in this way reflects the need for a creative, evocative redeployment of metaphorical language for describing the elusive complexities of living experience and developing a more expressive language that illuminates the dynamic life that is unfolding all around and penetrating human reality as it is lived (Küpers, 2012a). Furthermore, such expressive semantic manifests a strategic alternative to the age-old homogenizing notion of matter, evoking the sensual carnality of living experience. In particular, the carnal metaphor of Flesh expresses and allows associations to both the sensible and bodily commonality of beings and also the generative capacity of and elemental and medial being that invites post-dualistic interpretation. Flesh refers to both the particular carnal being and the more general element in which all beings and the world share. But with its indeterminate qualities it cannot be reduced to the old notions of 'subject' or 'object'. Rather, Flesh serves as post-dualistic formative medium or milieu anterior or as preceding conceptual bifurcations into 'subjective' and 'objective' or other opposing categories. As a formative milieu anterior to the conceptual bifurcation into the 'subjective' and the 'objective' (Merleau-Ponty, 1995: 248; see also 302), the Flesh-body refers to a kind of 'third being' ((Merleau-Ponty, 1985: 401). This being is an inter-factual 'hollowing' in-between that 'produces' subjective and objective realities and its intentional responsive relationships. As in-between it produces in the sense that it allows to emerge the subject and object that are then constructed as ordained poles. Thereby, it undermines also distinctions between consciousness and objectivity (Hurst, 1994: 345). As an intermediating realm, this Flesh inter-connects the pre-reflexive sentient and sensible body, through which inside and outside, passivity and activity, etc. enmesh. In this way, Flesh is linked to an original fabric that precedes what then becomes bifurcated into opposing categories, such as subject/object and a subsequent binary logic. Thus, thinking in terms of Flesh allows a critique of dualistic separations though opens up possibilities for developing a post-dualistic orientation. Such orientation is re-covering a pre-reflexive present that underlies all subject/object relations as well as all explicit differentiation and otherness. We can speak and be spoken to, hear and be heard, love and be loved only because we share the same basic condition; we are part of the same fleshly reality which entails to be also affectively enveloped with others (Merleau-Ponty, 1995: 234). Embodied selves and world are given in and mediated through the pulsating medium of Flesh by their dynamic

intertwining and mutual generativity. Metaphorically, this mediality is like quivering tissues on tissues, intercalated leaves, lace-works or the ever shifting rhythmic currents of water that are giving birth to the sea and the beach and their relationship. Thus, the nexus of mediating Flesh points to a 'texture of Being' (Merleau-Ponty, 1964: 166) or textile as common connective tissue of exterior and interior horizons (Merleau-Ponty, 1995: 131) and meaning. As such, it is woven through all levels of experience, preceding and making possible all particular horizons and contexts. This mediational being manifests as a kind of silent and invisible ontological 'fond', out of which self, others and things arise in reciprocal relations. As a fluid base for an elemental ontology, Flesh serves as an informing medium of all beings, and as such it serves as a common field and 'fundamental unity permeating all interrelated, interwoven things' (Cataldi, 1993: 60). This non-dualist ontology of generative immanence is experienced through, involves, processes through, and operates through specific foldings, gaps and role-swapping reversibilities.

The elements of our bodies share the same origin in deep time as the elements of landforms. Bodies and their senses are media for relating to our elemental geo-material past (Toadvine 2014, 2019)¹ thus to temporal phenomena that exceed our moment-to-moment lived experience. Our senses in their embeddedness in deep time reveal that the earth has and had its own phusis and "life" of a geo- & biomaterial alterity before humans arrived (in all their ambivalence) and for which indigenous people still have a geospatial vision (Reid et al. 2020).²

Self-critical Questions:

- Did we experience the otherness as other (radical alterity) of deep time and phenomena?
- Did we sense the "soul," selfhood, and "agency" of elements, stones, plants, animals?
- Did we resist what we think we already know t/here?
- Did we slow down (into depth of time)?
- Is our perception of the earth as a stable unchanging presence (and not as a living body and emerging "bodiment") like a particularly view of someone living inland, away from a coastline where land's boundary with water is in continual flux and that move in relation to bodies!
- How can we overcome the "empirical" tendency to alienate us from our pre-reflexive intuitive experiences?
- How we again? feel with (our) senses the ongoing process of phusis and time as flow?
- How can we sense the earth and its horizon as a dynamic unstable environment?
- What was, in which way "transgenerative" in this experience?
- What are lessons learned for organizing future walk-shops?

Observations

o-Starting with waiting for others to join, art material, preparation, blowing balloons of earth

Nature "spoke" to us before the event in form of cold wet weather, which might explain that no more participants showed up. The event turned out to be more spontaneous and "pleasant" than expected (no rain, surprising encounters, nice break in bistro, etc.).

1- The walk in silence was disturbed by traffic, construction work and talks.

It was difficult to imagine how at the beginning the earth was a ball of gas and fire in outer spheres.

¹ Toadvine, T. (2014). The elemental past. Research in Phenomenology, 44(2), 262–279. <https://doi.org/10.1163/15691640-12341288>
Toadvine, T. (2019). Geomateriality. In G. Weiss, G. Salamon, & A. V. Murphy (Eds.), 50 concepts for a critical phenomenology (pp. 149–154). Northwestern University Press.

² Reid, G., Sieber, R., & Blackned, S. (2020). Visions of time in geospatial ontologies from Indigenous peoples: A case study with the eastern Cree in northern Quebec. International Journal of Geographical Information Science, 34(12), 2335–2360. <https://doi.org/10.1080/13658816.2020.1795176>

For the first 100 million years of the evocatively named Hadean Eon- the Earth was a broiling soup of molten rock, inhospitable to life as we can conceive of it which called to imagine earth as becoming uninhabitable again!

2- Listening to singing of birds contrast with swinging of noise in park

1.5 km (0,75 km) or 1.5 billion years first incontrovertible signs of life appeared: the prokaryotes or bacteria.

Sensing an extended sense of life (anorganic and organic as "one")

3- Under the Magnolia Tree, meeting a female artist working on textile/textures

Imagine appearance of diversified life forms
2.5 km (1,25 km) (2.5 billion years)

Formation of the first eukaryotic cells – the product of a wildly innovative co-operative bacterial breakthrough that eventually led to the appearance of the multicellular beings that populate our world – plants, animals fungi and protoctista: the algae, amoeba and oxygen...

4- Under the Pavilion, doing breathing exercise

Experience the first tentative wisps of free oxygen in the atmosphere

5- Art of/in Nature Finding shelter in Parc Bistrot and comparing trees

Links to how art can & art nouveau (Park) has expressed living organisms in natural, feminine non-linear based forms and craft as inspiration for sustainable life today!

3.5 km (1,75 km)

Parc as bio-socio-eco-spheric location, hospitable place for flourishing life and diverse living.

Life emerges at scale as the "accident" of life, absolute unlikeliness of life: the series of deeply significant random cooperations between the elemental building blocks of life to form the first cellular life forms and then the collaboration within the cell needed.

For the myriad multicellular life forms that populate our world today 100 million species of life – the vast majority of which will perish unknown to science, in our current human caused "sixth mass extinction."

Sensing the Parc as place of life and living beings (listening, birds, seeing plants, sensing atmosphere, smelling air, touching trees, appreciating diversities, etc.)

Imaging danger of planet becoming uninhabitable

Status of meaning (problem of loss, need for navigation)

We may ask ourselves and share thoughts about: For what purpose and how! do we as humans exist in web of life? How can we sense, and make sense, how can we feel, think, decided, shape and act thus live differently!

How can we cocreate our local places as parts of bio-socio-eco-spheric earth?

Addressing nexus of everyday habits, habitus and habitat!

6- Giving balloons of earth to children

Back via busy road Jeanne d'Arc

4.6km (2,3 km) 4.6 billion years.

Formation of Nancy regional geology. (Someone makes a 2 minute reflection/observation)

The last Step of the walk - 30 centimeters (300,000 years) of our 4.6-kilometer walk – HUMANS – we are crushing the Earth with our life style:

- humans come to existence. Map - The Holocene – the short geological blip since the end of the last ice age starts at 1.3 cm (13,000 years) from the end of our walk.

- 6 millimeters (or 6,000 years) from the end, recorded history begins in Mesopotamia and Egypt, and just

- 1/5th of a millimeter from the present day (200 years ago), the Industrial revolution kicks in, triggering changes in the climate and biodiversity so profound that the era we are living through may well be dubbed by scientists as the 'Anthropocene' (Küpers, 2020).

In this brief time:

- We are now killing 56 billion farmed animals every year, about 3,000/second.

- We have caused the extinction 10,000 wild species per year (0.01% of the 100 million species estimated to exist)

- We as species are aware and conscious about how unsustainable and destructive we are .

- We realised our ability to respond adequately and abilities to transform things if we choose to.

- We can speak now about this experience of moving the deep time and can share our feelings, reflections and ideas for our roles and tasks as well as developing and enacting together TRANSGenerating options.

Return to Campus



7- Destroying balloons of earth

Visiting an art exhibition

Having a hot drink in provided place on campus

There was the possibility for expression of the participants via a "drawing" created with colored pencils and on white paper. In these expressions the participants can represent with a drawing what this walk has evoked for them in terms of feelings, intuitions or inner impulses for change related to the evolution and present and future of life on earth.

– Time for Sharing of perceptions, feelings, thoughts, insights

– Perspective: How do we walk differently now?

Open-Source Discourse in Practice (OSD)

Vittoria DAIELLO & Jordan TATE

Current artistic discourse is not "open-sourced" but is circular, reflecting and reinforcing ideologies, references, and thematics within the artistic space that seem to legitimize the presence of the curators and their research as artistic interventions in the material-cultural milieu. More, that curators have been drawn into the art world and given all sorts of specialist titles or professions that confer upon them a priori a greater degree of knowledge and powers, rendering the institution of the art gallery "artistic," itself a radical break with the view that art is not simply aesthetic, but an art of culture. Such hierarchies, of expertise, and of the capacity to manipulate discourse and give access to an information space, are systematically employed in the social, political, and cultural life of late capitalism. The practice and the politics of the contemporary art scene are thus immanent to the social and cultural structures of late capitalism. Art is in fact part of the image capital that underpins this constellation of capital and the dominant logic of production and reproduction.

The problems of the gallery sphere are not, of course, unique to contemporary art. At least since the period in Europe after World War II when the discourse of the generic museum was one of its most significant ideological strongholds, there has been an ongoing conflict within the discipline of the art historical and art historical practice itself. And this has made art history's heterogeneity into an analytical problem. Although it is true that art history can, of course, be practiced in different ways, these different ways are not radically different, and they represent important affinities and differences. The differences are not so much about theoretical paradigms (though there are differences between some paradigms), but between different philosophical, political, and social commitments. An art historian can be a conservative or liberal, and he can define his work as theoretically liberal, ideologically libertarian, or any number of other possibilities.

The text above was automatically generated by IA (e.g. InfgerKit developed by Adam King). The first italic sentence was the input to the program. In a time when ChatGPT makes a buzz and raises multiple issues, we aim at addressing the following questions. What if AI goals were informed by a yearning for justice greater than any individual? Responsibilities to one another and the planet? The unruliness and contradictory qualities inherent in human subjectivities?

Using Human-AI Interaction to facilitate collaborations among the participants of OSD, we aim to decentralize the phenomenon of academic discourse with a platform that invites new modes of sociocultural criticism through creative, exploratory dialogic intra-actions among a diversity of people, objects, and ideas. OSD will establish a distinctive paradigm of research-creation by integrating AI and real-time human interactions among, within, and beyond the academy.

We began with the idea of developing an AI-assisted, arts-based, collaborative discourse platform. We envisioned a platform that enabled people to connect with one another through the submission of an artwork or artifact of visual culture (self-created or appropriated from a source) that served as a catalyst for a dialogue. We imagined how the exchanges could be a vehicle for low-stakes, creative, inductive production of collaborative "theories" about issues of interest to the participant pairs.

However idealistic and well-intentioned we were, and however creative OSD might be, the project is always going to be limited by the inherent biases of AI. As Jordan said: "What you give it, gives you what you want - because it is programmed to do this. Raising the question, why would we want to use AI matches to create a critical discourse conversation?"

We want to address a problem that is historically, economically, and otherwise supported by existing power structures: to truly challenge the manner in which discourse is generated and sustained.

We arrive at Trans-Generatives with a proposition for developing a discourse through shared interests in decolonizing academic knowledge and authority through arts-based processes that explore entanglements. We take inspiration from Barad's (2010) conceptualization of quantum entanglement which describes entangled systems exhibiting correlations that cannot be explained by classical physics. In Barad's view (2007), entanglement encompasses a "yearning for justice larger than any individual or sets of individuals" and is "therefore necessarily about our connections and responsibilities to others" (xi). Thus, as Leonard (2020) observes, "a person's actions should be recognized as always influencing others," since a byproduct of entanglement is the impossibility of extricating the self from ethical matters (p. 6).

In what ways might AI function to draw our attentions to one another and our entanglements with others and the world (BEING /INTRA-ACTIONS) rather than simply functioning as a tool for information collection and aggregation?

Proposed Action of the Project: OSD will facilitate inclusive, conversational arts-based intra-actions (Fox & Alldred, 2015) among people with divergent viewpoints, individuals often silenced, or those reluctant to participate in collaborative theoretical discourse and processes occurring within and around art experiences.

Context: Art making and critical responses to art are the instrumental metaphor guiding this project. These activities hold a unique place in our social fabric, engendering confidence, curiosity, attention, surprise while teaching patience for ambiguity. Fundamentally, art making processes are validated by the belief that the thing that one is making will be a viable and meaningful contribution to a broader social discourse. Additionally, this acknowledges the act of art / object making as research and a potential input that exists both in conjunction with text, and informed by historical precedent.

Significance: Breaking new ground in AI-assisted critical discourse, OSD transcends simple archive development by "training" AI with didactic and interpretative art and culture texts to promote responsive engagement and sensitivity to intra-actions among people, objects, and affects.

A persistent problem within the academy is the limited access to expertise, discourse, and critique in arts areas – which not only restrains the opportunity for learning and growth, but also inherently limits the perspectives available from within the academy. As art is a discipline that relies on informed social analysis this also limits the possibility for disciplinary growth. We need more opportunities beyond the academy for making and negotiating meaning creatively in dialogue with other people. These opportunities for dialogic meaning-making must become more inclusive, more supportive of complexity and difference, and more capable of building empathy than what currently exists as academic discourse.

Current academic and artistic discourses are often not "open-sourced" and inclusive, but are instead circular, reflecting and reinforcing ideologies, references, and themes. Within these feedback loops and silos, there are few opportunities to introduce novel ideas from outside of the academy or the gallery/museum system. Open-Source Discourse (OSD) responds to a pressing need for academic and theoretical discourse alternatives that are more inclusive and acknowledge the inherent value of informed, critical voices that are often historically excluded from academic discourse.

OSD aims to facilitate broader access to art knowledge, expertise, and discourse that are usually reserved for institutional settings and create opportunities for researchers across disciplines to collaborate with multiple, interested stakeholders within and outside the academy to shape development of AI platforms that facilitate arts-based forms of discourse that are free, public, and inclusive.

Open-Source Discourse emerges within the context of the growing need for inclusivity in academic discourse. Despite a plenitude of communication tools and social interaction platforms, there are few opportunities for those outside of the academy to engage in creative, communal, low-stakes exploration and ideation within an academic space. In the OSD platform, art making, art sharing, conversations, people, and individuals' affective responses are all "data" that create new possibilities for knowing one another and the world in new ways.

In the OSD platform, art making, art sharing, and the conversations that occur with these processes are all "data" that create new possibilities for knowing one another and the world in new ways. Philosophical-theoretical perspectives in this project are drawn from feminist new materialist scholarship (Barad, 1997, 2003; Braidotti, 2019; Fox & Alldred, 2015; Haraway 2016), arts education criticism discourse (Barrett, 2002, 2020), and theories of new materialism in fine arts education (Leonard, 2020).

While not the first attempt at training AI on artworks (Achlioptas, Ovsjanikov, Haydarov, Elhoseiny, and Guibas, 2021), OSD in theory will leverage existing image analysis methods paired with didactic texts that inform and contextualize the artworks within an art historical, political, and historical structure.

We believe that adding art to the dialogue opens different pathways for conversations to develop, which could be important when people find it difficult to relate to one another on a person-to-person level. In a sense, OSD employs art as a mechanism of mediation, facilitation, diffusion, and curiosity. Art making inspires the philosophical questions that drive human sensemaking and forge understandings of what it means to exist in a world (Greene, 1977, 1995).

Rather than focus explicitly on subjective affective response to artworks, AI treats the artworks as research inputs rather than primarily as emotional catalysts. This highlights two fundamentally different arts approaches and enables access to the expertise, discourse, and critique that acknowledges an artwork as a valid research tool.

Essentially, we seek to reframe critical/theoretical discourse around art as a creative act and novel method of fostering a more inclusive academic discourse. OSD will facilitate participation equity by empowering people from all societal sectors to construct meaning together through reflective processes of discussing and creating artworks and discursive texts (Stains, 2012). Using arts-based, AI processes informed by object-oriented ontology (Harman, 2013) and the sociological imagination (Mills, 1959), OSD will facilitate novel forms of interaction among individuals.

By providing a platform for co-construction of knowledge through artmaking and discussion, OSD will emphasize the creative processes inherent in building an open and inclusive critical discourse and demonstrate the necessity of each person's contribution to dialogues about issues of communal importance while also acknowledging the value theory as a fluid, inclusive, and self-critical enterprise that is not just informed by, but also informs and restructures academic discourse.

Note: OSD is similar to StoryCorps's initiative OneSmallStep' which pairs people with different ideological perspectives for the purpose of have a conversation. OSD pairs people from different ideological views for the purpose of dialogue, however, unlike OneSmallStep, art is a fundamental part of the dialogue process. "One Small Step pairs strangers with different beliefs for a 50-minute conversation—about their lives, not about politics. The growing divisions in our country pose a threat to our democracy. Participate in One Small Step and become part of the solution." (Website)

Questions to consider:
What kind of AI technology would users trust and be open to using?

1 <https://storycorps.org/discover/onesmallstep/>

What kind of information or data would be most useful, to their mind, to build a database that fosters open discourse?

Given our current understandings of the biases of AI, do you think it could be possible to develop an AI platform using existing databases (such as WikiArts, Artemis, etc.)? Concrete objectives do the potential users think an AI-driven open discourse platform enable?

What structures can you envision that encourage sense-making from data supplied through random inputs?

What ideas and questions surfaced in relation to the topic of AI and arts-informed dialogues? What issues might we emphasize going forward?

Considering the inherent biases of AI, is it feasible to develop an AI platform using currently existing databases (such as WikiArts, Artemis, etc.)?

What kind of information or data would be most useful to build a system that fosters open and inclusive, arts-informed discourse among diverse constituents?

In what ways might emergent connections from Trans-Generatives 2030 be developed into collaborations across disciplines, institutions, geographic regions, and diverse participants and stakeholders? How might AI support these processes?

Decolonial thought is far more than a tool to problematize AI. It is an invocation to make intelligible, to critique, and to seek to undo the logics and politics of race and coloniality that continue to operate in technologies and imaginaries associated with AI in ways that exclude, delimit, and degrade other ways of knowing, living, and being that do not align with the hegemony of Western reason. It is located and specific. It is about the production of race and divided worlds; it is about power and the precise effects of power on being in the world today; it is about knowledge and how knowledge is ascribed legitimacy and value; and it is about a politics of resistance that enters and undoes the object of its critique.

Rachel Adams, *Can AI be Decolonized?*

Conversations during the workshops:

We are the foundation of bias that is distilled by AI

So, I get that you are trying to use art to define new modes of being/acting/use for AI?

Yes, this is a goal for us - and specifically AI's value in facilitating dialogues

As an ancillary outcome, we are still fundamentally focused on creating a robust open-source discourse between disparate individuals that force everyone to grow. That said, the more conversations we have the broader our goals get!

Machines CAN beat human intelligence eventually and that is precisely why bias and canonization become epistemological and ethical problems.

A motto could be: Introduce the missing data. It is a powerful concept.

I am thinking about the community that you intend the Open Source Discourse site for. That community could be given the inquiry questions you have as a vehicle so that they themselves to deconstruct AI and re-see and reframe it as their own collective art making. I think social justice really starts when people understand that they can challenge and reform underlying/overarching constructs and contexts that are usually not questioned and instead are accepted as rote.

Being human means having convivial ways of acknowledging and trading biases Learning could be about revealing biases to self and others.

One could question the fixation on being "first," which is Western/capitalist in itself.

YES! And the fear of uncertainty is powerful

I should clarify - the notions of ethnocentrism are concrete examples / microcosms of the larger issues.

It is very much a study of communication, entanglement, and perspectives that we are trying to foster utilizing AI as a means to provide information and access to (potentially) informed discourse.

So, how should we wrap it up?

Maybe invite people to continue by email? If they desire?

Yeah, sounds good. Though I doubt we

will have any ...

Some other thoughts – some principles from another online community here in Silicon Valley that I have been a part of - We Before Me, No Money - only sweat equity and volunteered time, slow down innovations in organizing....

When did we become human resources for organizations – instead of humans creating organizations for collective goals?

In our practice we work with teachers and artists on documenting their work, on documentation. But we explore directly with them the limitations of documentation, the debate about “truth,” the understanding of the different faces of perspective, the ways in which different mediums recast a story. From their perspective, they think about how their documentation is not just of the classroom, but the documentation is also of themselves.

We are the data.

Emerging additional questions

How do we listen (or choose to listen)?

Is there too much information / data to parse? Is there enough transparency in the way AI operates?

Is there a systematic way to aggregate / compile / analyze vast amounts of data?

Is aggregation a necessary strategy (particularly within the arts)?

Does aggregation hinder individuality?

Is the notion of aggregation predetermined to afford AI or large data processing a measure of success?

Can AI assist in social justice?

Data is information (it is not inherently useful) – it is the use of data that is crucial.

It becomes critical when different and opposing concerns arise in the problem solving and research.

What are the dangers of trusting or engaging with AI?

How are we defining “criticality” and what is its broader value?

Is avoiding bias at any level possible?

By whose standards (or what standards) is bias determined?

How can AI be leveraged / is losing subjectivity through AI a broader concern.

Augmentation: The consequences of our presentation at Trans-Generatives 2030.

The conversations and questioning that appeared during the workshop have brought to light some sub-evaluated difficulties of the project, the major one being the limitations and bias of the dataset.

Given the depth of bias in the database, and in part due to the polemics raised during our presentation, the project has morphed into a database augmentation project with our global University partners.

We are now attempting to get researchers from various institutions to redress the exclusion of non-western / non-white artists in the dataset.

Resources from the presentation:

Text Generator

<https://inferkit.com/docs/generation>

REFERENCES

Achlioptas, P., Ovsjanikov, M., Haydarov, K., Elhoseiny, M., & Guibas, L. J.

(2021). Artemis: Affective language for visual art. In Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), pp. 11569-11579.

Barad, K. (1997). Meeting the universe halfway: Realism and social constructivism without contradiction. In L. H. Nelson & J. Nelson (Eds.), *Feminism, science and the philosophy of science* (pp. 161-194). Dordrecht: Kluwer Academic.

Barad, K. (2003). Posthumanist performativity: Toward an understanding of how matter comes to matter. *Signs*, 28(3), 801-831.

Barad, K. (2007). *Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning*. Duke University Press.

Barad, K. (2010). Quantum entanglements and hauntological relations of inheritance: Discontinuities, spacetime enfoldings, and justice-to-come. *Derrida Today*, 3(2), 240-268.

Barrett, T. (2002). Interpreting art: Building communal and individual understandings. In Y. Gaudelius & P. Speirs (Eds.), *Contemporary issues in art education* (pp. 291-301). Prentice Hall.

Barrett, T. (2020). *Criticizing photographs:*

An introduction to understanding images.

Routledge.

Braidotti, R. (2019). *Posthuman knowledge.*

Polity Press.

Fox, N. J., & Alldred, P. (2015). New materialist social inquiry: Designs, methods and the research-assemblage.

International Journal of Social Research Methodology, 18(4), 399-414. DOI: 10.1080/13645579.2014.921458

Greene, M. (1977). Toward wide-awakeness: An argument for the arts and humanities in education. *Teachers College Record*, 79(1), 119–125.

Greene, M. (1995). *Releasing the imagination: Essays on education, the arts, and social change*. New York, NY: Jossey-Bass.

Haraway, D. (2016). *Staying with the trouble: Making kin in the Chthulucene*. Duke University Press.

Leonard, N. (2020). The arts and new materialism: A call to stewardship through mercy, grace, and hope. *Humanities*, 9, 84. doi:10.3390/h9030084

Eyes on the eARTH is inspired by the NASA's GRACE project (which monitors our planet's vital signs). This audiovisual composition artistically shows the global changes of the planet Earth based on the research made by scientists, like the greatest threats facing humanity today- climate and ecological change.

Topics

Plastic islands like “Pacific Trash Vortex”; human producing noise and light pollution (mortal for bird reproduction system); The increase in the oceanic CO2 concentration has increased the ocean's acidity; Ice, which covers 10 percent of Earth's surface, is disappearing rapidly; as levels of CO2 in the atmosphere increase, 86% of land ecosystems globally are becoming progressively less efficient at absorbing it; the last four years were the warmest on record and GHGs from human activities are still rising... Climate-related risks associated with climate variability and change exacerbated food insecurity in many places, in particular Africa due to the impact of drought, which increased the overall risk of climate-related illness or death. Higher sea-surface temperatures endangered marine life and ecosystems.

A change of mentality of human being is necessary to create the world a better place. By relying on descriptive complexity, anticipation, dysfunction, disruption, interdisciplinarity and the search for alternatives, which are the ordinary means of art, we can work to transform our conceptions of the human being and his or her relationship to the world.

Reduce CO2 by changing our lifestyle like planting trees: forests are lungs of the Earth.“Carbon footprint.” Take notes: how many CO2 we are producing with our lifestyle, and minimise it by recycling and reducing: meat eating, electricity consuming, plastic use, non-ecological transport use.

According to a new study funded by NOAA's California Sea Grant, at a California oyster hatchery, farming native seaweed improved water quality.

Rather than suggesting technical solutions to the world's problems, Gregory Bateson hoped that he might inspire us to start thinking about changing ourselves. For, ‘the major problems in the world’ he wrote ‘are the result of the difference between how nature works and the way people think.’

The art video Eyes on the eArth consists in six parts. The six constituent parts are like 6 visions (inspired by *Scivias, Liber divinatorum Operum Simplicis Hominis* by Hildegard von Bingen). The titles of 6 parts are inspired by the book *Steps to an ecology of mind* by Gregory Bateson.

I. Metalogue

Conversation between man and nature; “The Macrocosm, the Microcosm, and the Winds.”

The paired concept of Macrocosm and Microcosm presents the idea that there is a corresponding similarity in pattern, nature, or structure between human beings and the universe. The concept of microcosm/macrocosm views man as a smaller representation of the universe and the universe as an anthropomorphic existence. This concept is found throughout the history of thought from ancient times through the renaissance, and in various religious traditions including Buddhism and the Upanishads. Similar concepts were held by hermetic philosophers like Paracelsus, and by Baruch Spinoza, Leibniz, and later by Friedrich Schelling (1775-1854).

Pythagoras conceived the number or numerical ratio as the universal principle of harmony and understood that human aesthetic experience in music and art is closed tied to the orderly movement of stars.

The Neo-Platonist Plotinus fused the concept of microcosm/macrocosm into his unique mystical metaphysics.

In Plotinus' metaphysics, every being is both spiritual and material, and each being manifests these natures in varying degrees. Plotinus developed a clearer concept of “world-soul” (Latin: *Anima mundi*)

Paracelsus's philosophy of correspondences was based upon the belief that for every ailment and illness in Man (the microcosm) there existed a cure in nature (the macrocosm).

And, by Leonardo da Vinci, who noted common features between the natural world and the human body such as the circulation of liquids and basic branching mechanisms.

In modern sociology, the concept of microcosm has been predominantly used to describe a small group of individuals whose behavior is typical of a larger social body encompassing it. A microcosm can be seen as a special kind of epitome. Conversely, a macrocosm is a social body made of smaller compounds. In physics, scale invariance describes the same phenomenon.

“The metaphysical relationship between the individual human and nature in this model is no longer merely that of a part that fits into the divine plan for the whole, but one in which the self, individual knowledge, and understanding become part of what it means to be a human. By assigning cosmological value to the microcosm of human individuality, this conception bespeaks a departure from the pre-modern image of human agency.”

In yoga tradition the sound and vibration is very important. Everything has a vibration. This also a scientific claim. The atomic particles vibrate. All physical beings, humans, animals, plants also objects are composed of the vibrating atomic particles. Sound also travels in waves; different sounds have different frequencies. So, the words have unique vibrations according to how they are uttered. Our emotional states and our intentions effects our voice.

The Vedic wisdom of life tells us about five elements. Five

Eyes on the eARTH

Ieva KLINGENBERGA with Krista BRICE, Simona SOCCORSI & David BACCI, Nasser EL GILANI, visual artists. Paola GANDIN, poet.



An audiovisual composition is a multimedia artwork which contains three basic elements: audio/music, video, interacting audiovisual element. As a composer and audiovisual artist I create the script, record the audio, compose the original music for musical instruments and/or electronic instruments, shoot the video, edit video-montage and post-production by using professional softwares. Visual artists participated with a previously made artwork, inspired by one or more topics they have chosen from a list. Poet Paola Gandin created a literary artwork inspired by one or more topics she has chosen from a list.

What's happening to our home planet?

How the planet Earth has changed in last 5-20 years (global climate changes, ecological problems etc.)?

Is the Universe changing aswell?

How is it influencing us as a human beings?

How human activities are interacting with complex Earth systems and ultimately affecting the natural resources on which we depend?

What can we do to help our planet to survive?

principles of matter. Those five cosmic principles are ether, air, fire, water, and earth.

As Origen observed: 'Understand that you are another world in miniature and that in you are the sun, the moon and also the stars'. This analogical relationship is sometimes expressed explicitly, as in some of the more ancient sections of the Upanishads— the Brihadaranyaka and the Chandogya for instance—where the analogy between the human organism and the macrocosmos is drawn step by step by means of correspondences with the organs of the body and the senses. These oriental concepts first appear in the West during the Romanesque period: Honorius of Autun, in his *Elucidarium* (12th century) states that the flesh (and the bones) of man are derived from the earth, blood from water, his breath from air, and body-heat from fire. **Each part of the body relates to a corresponding part of the universe: the head corresponds to the heavens, the breath to air, the belly to the sea, the lower extremities to earth.**

Thus, Hildegard of Bingen, living in the same period, states that man is disposed according to the number five: he is of five equal parts in height and five in girth; he has five senses, and five members, echoed in the hand as five fingers. Hence the pentagram is a sign of the microcosmos.

II. Schismogenesis or Creation of Division

Moral World and the Material Universe and vice versa.

Expanding Our Moral Universe - Our World.

Interaction of ancient and modern civilizations on material, social, economic and philosophical planes.

The self aware universe- how consciousness creates the material world. (Amit Goswami)

Gravity is an attraction between two objects—such as a human and the Earth—and its strength varies depending on how much mass those objects have and how far apart they are.

The evolution of the universe is determined by a struggle between the momentum of expansion and the pull (or push!) of gravity.

III. The Cybernetics of Self

"The arrival of the soul in the body of an infant;" "Departure and fate of the soul." *Scivias*

In religion, **ensoulment** is the moment at which a human being gains a soul. Aristotle believed a fetus in early gestation has the soul of a vegetable, then of an animal, and only later became "animated" with a human soul by "ensoulment."

Many myths have linked birds to the arrival of life or death. With their power of flight, these winged creatures were seen as carriers or symbols of the human soul, or as the soul itself, flying heavenward after a person died. A bird may represent both the soul of the dead and a deity at the same time.

Myths from several regions associate birds with the creation of the world. One of several creation stories in ancient Egypt said that when land rose out of the primeval waters of chaos, the first deity to appear was a bird perching on that land. The Egyptians called the god the Benu bird and portrayed it as a long-legged, wading heron in the sun temple at Heliopolis. The Benu bird created the universe and then made gods and goddesses and men to live in that universe.

In Ancient Egypt, the ibis was considered sacred as it was viewed as a manifestation of Thoth, a god of the moon and wisdom. In art, Thoth was usually depicted as a man with the head of an ibis, or more rarely as a baboon.

Human produced noise and light pollution- mortal for bird reproduction system. Bird populations have declined by about 30% in the last few decades.

When considering noise pollution, results showed that birds that live in forested environments tend to be more sensitive to noise than birds in open environments.

Every winged being is symbolic of

spiritualization. The bird, according to Jung, is a beneficent animal representing spirits or angels, supernatural aid, thoughts and flights of fancy. Hindu tradition has it that birds represent the higher states of being. This interpretation of the bird as symbolic of the soul is very commonly found in folklore all over the world.

IV. Somatic Change in Evolution

"Man's Fall and the Disturbance of the Primordial Elemental Harmony." *Scivias*

Animal extinction.

Animal worship (or zoolatry) is rituals involving animals, such as the glorification of animal deities or animal sacrifice. When a god is respected or worshipped by means of a representative animal, an animal cult is formed (Teeter et al., 2002, p. 355).

The Egyptian pantheon was especially fond of zoomorphism, with many animals sacred to particular deities—cats to Bastet, ibises and baboons to Thoth, crocodiles to Sobek and Ra, fish to Set, mongoose, shrew and birds to Horus, dogs and jackals to Anubis, serpents and eels to Atum, beetles to Khepera, bulls to Apis.

Animals were an important aspect of the Shaman religion in Central Asia. Also known as "assistant spirits," "guardian spirits," and "helping spirits," animal spirits are an integral part of a shaman's work.

Living creatures, including humans, culminate to form one large, united life-force in the Buddhist religion. Buddhists, therefore, believe that to harm another living creature is to, in fact, harm yourself as all life-forms are interrelated (Regenstein 1991, p. 237)

Deforestation.

Tree of the knowledge of good and evil. Sacred trees. Tree of life. Tribal peoples' survival, indigenous land rights.

The form of a tree can almost be seen a having human-like qualities. Trunks can look like bodies, branches like arms, and leaves like hair.

We are the creative union of elemental forces evolving towards the harmony of our true nature. An 'ecosystem of the organic mind.'

V. Redundancy and Coding

"The New Heaven and the New Earth and the New Ordering of the Elements." *Scivias*

In the 200-plus years since the industrial revolution began, the concentration of carbon dioxide (CO₂) in the atmosphere has increased due to human actions.

The ocean absorbs about 30% of the carbon dioxide (CO₂) that is released in the atmosphere. As levels of atmospheric CO₂ increase from human activity such as burning fossil fuels (e.g., car emissions) and changing land use (e.g., deforestation), the amount of carbon dioxide absorbed by the ocean also increases. Carbon dioxide, which is naturally in the atmosphere, dissolves into seawater. Ocean acidification is already impacting many ocean species, especially organisms like oysters and corals that make hard shells and skeletons by combining calcium and carbonate from seawater. Changes in ocean chemistry can affect the behavior of non-calcifying organisms as well. The ability of some fish, like clownfish, to detect predators is decreased in more acidic waters. Ocean acidification is currently affecting the entire ocean, including coastal estuaries and waterways. Billions of people worldwide rely on food from the ocean as their primary source of protein.

Carbon dioxide (CO₂) in the atmosphere is now reaching levels 50% higher than when humanity began large-scale burning of fossil fuels during the industrial revolution.

For a really strong greenhouse effect, we should look at Venus. Venus is similar to Earth in terms of size and mass, but its surface temperature is about 460°C. This is hot enough to melt lead! The Venusian atmosphere is mainly made up of carbon dioxide, a greenhouse gas. Mars does have some atmospheric carbon dioxide, but almost no atmosphere! The

existing atmosphere is so thin that it cannot retain energy from the Sun. On Titan, Saturn's largest moon, there is a moderate greenhouse effect, mostly due to the large concentrations of methane (another greenhouse gas) in its atmosphere. Astronomers have compared Titan with the early Earth. It would be a suitable place for life if it were not so cold: its surface is at a freezing -180°C. Understanding the factors influencing Titan, Venus and Mars, could also help to us to understand the climate on Earth.

Coding is the process of transforming ideas, solutions, and instructions into the language that the computer can understand – that is, binary-machine code. Coding is how humans are able to talk with computers. Coding involves communicating and giving instructions for different actions we want our computers to perform using a computer programming language.

In linguistics, **redundancy** refers to information that is expressed more than once. Examples of redundancies include multiple agreement features in morphology, multiple features distinguishing phonemes in phonology, or the use of multiple words to express a single idea in rhetoric.

Gene redundancy is the existence of multiple genes in the genome of an organism that perform the same function. Gene redundancy can result from gene duplication.

VI. Crisis in the Ecology of Mind (or The Heat is On)

"The Last Judgement and the Fate of the Elements." *Scivias*

Ice is disappearing rapidly.

Ice represents principally two things: first, the change induced in water by the cold—that is, the 'congelation' of its symbolic significance; and, secondly, the stultification of the potentialities of water. Hence ice has been defined as the rigid dividing-line between **consciousness and the unconscious** (or between any other dynamic levels).

Earth's atmosphere reacted in surprising ways to the lowering of emissions during the pandemic, showing **how closely climate warming and air pollution are linked.**

Fire + Air: this sign combination is wildfire, encouraged. Wildfire is an agent of confusion. If you've ever prepared for an exit strategy in case of fire, you know that it's super important to know where the doors are because fire creates panic and confusion.

Hell or Heaven? To be damned or to be saved?

A change of mentality of human being is necessary to create the world a better place.

Creating New Dialogues and Solidarity in the Face of Inequalities: A Music Performance and Workshop

Gregory JACKSON & Svenja TAMS

The session combined music performance and workshop to generate dialogue about the use of arts-based formats for making inequality visible and building new forms of solidarity to reduce inequality (SDG 13). Music performances incorporate accounts from ethnographic research and the media, illuminating different aspects of inequality. The workshop explored this approach as a template for trans-generative management learning. The workshop reported on a series of projects undertaken by students in Berlin to incorporate intercultural field research of hidden voices that constitute fields of inequality into a dialogue with different artistic mediums.

1. Context and Aims

Reducing inequality is central among Sustainable Development Goals, and a factor that figures deeply into achieving transformations to a sustainable economy. Since people in social and economic exclusion are particularly affected by environmental breakdown, it is increasingly important to ask how we can reduce inequality. While social sciences excel in documenting and explaining inequalities, artistic work offers unique ways of seeing and sharing the experiences of social exclusion (Adler & Delbecq, 2018; Barry & Meisiek, 2010). As musician Robert Fripp states, "Science is in the knowing, while art is in the perceiving." In order to engage people in the social transformations required to reduce durable inequalities, a necessary condition is that people perceive one another, and develop solidarity across diverse sets of communities. Cohesive communities often exist in the small world of dense local social ties, but a challenge remains as how to expand the boundaries of community in accordance with a notion of solidarity (Heckscher & McCarthy, 2014). Building solidarity involves different communities establishing an understanding of one another, and building a series of reliable commitments that go beyond temporary outbursts of empathy. Although solidarity, grounded in a communal sense of obligation to support collective action, is likely to be an important foundation for reducing inequality, the conditions of late modernity make it increasingly difficult to ground solidarity in local community attachments. What more is, social transformation in the context of sustainability and social inequalities demands a shared sense of community with others who are not part of our lifeworld. The sense of community on which solidarity feeds needs to be found through other ways of identifying with the fate of others, including strangers. Here both science and art may play a role. While science offers knowledge about the world, art enables us to integrate this knowledge as mindful understanding (Barry & Meisiek, 2010). Here, we argue that bringing science and art into generative dialogue can also build solidarity for our interdependent existence.

In this session, we introduce a music project entitled *Fantasia on a Theme from Social Science* which follows a concept of intertextual engagement between music and the social sciences. In this project, Gregory Jackson shifts roles from social scientist to musician and collaborates with various colleagues from sociology, anthropology, and business studies.



Each song collaboration is based on a particular piece of research, often book projects that use ethnographic research techniques. The songs incorporate either a narrative or direct quotations from informants drawn from the fieldwork. These materials are read by each social science author, forming the basic musical raw materials for each song. Finally, Gregory Jackson develops the music based on a set of improvised themes in acoustic or electric guitar, and makes extensive use of live looping techniques. Live looping allows the addition of multiple layers of sound in real time. Using repetition and recontextualizing, the music repeats into a continuously evolving environment of words and sound – a sound collage.

This project has resulted in six pieces of music performed to audiences in Berlin, New York, and Tokyo. A set of live and studio recordings has been released in autumn of 2021.

The online Trans-Generatives 2030 performance and workshop brought together materials from the arts, particularly music, and social sciences with an emphasis on organization and management, sociology, and anthropology. The session combines two segments, performance and workshop.

2. Music Performance Segment

The performance segment comprised two musical performances featuring Gregory Jackson on guitar and live looping.

The session opened with a first composition entitled "A Birthday Louisa Will Never Forget."

Jackson, Gregory (Guitar, loops, devices) and Costas, Jana (Voice) A Birthday Louisa Will Never Forget. Live Performance May 22, 2021. Premiered at Die Berliner Salonage on May 28, 2021 as digital live stream from the Lettrétage, Berlin.



This piece is a collaboration with Professor Jana Costas (European University Viadrina Frankfurt - Oder) drawing material from her book *Dramas of Dignity: Cleaners in the Corporate Underworld of Berlin* (Cambridge University Press, 2021). The narrative explores the experience of a cleaning worker from Africa, and her attempts to build relations with co-workers, but only to face ridicule and social exclusion. The music features a long narrative form of text supported by two distinct guitar themes representing the "blues" of everyday life in Berlin and the memory of a distant life in Africa.

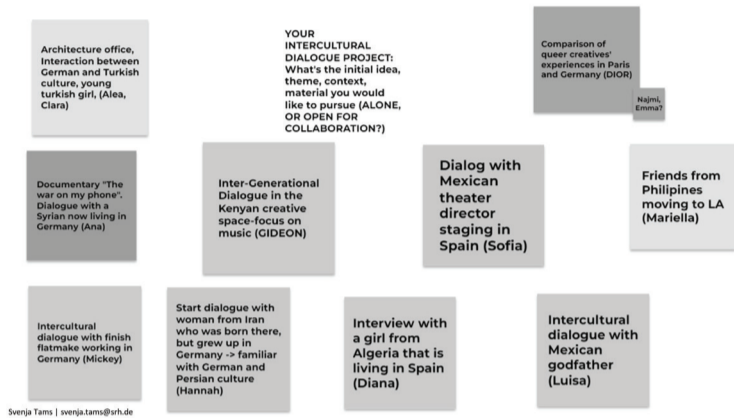
The session closed with a second composition entitled *Minimum Client*. This piece is a collaboration with Professor Brooke Harrington (Dartmouth University) based on quotations from her book *Capital Without Borders: Wealth Management and the One Percent* (Harvard University Press, 2016). This narrative explores the elite world of

wealth management, and the ways in which super rich avoid taxation and hide their extreme wealth from public scrutiny. The music features a very sparse use of quotations from key informants, which are disassembled and reassembled, using fragmentation and repetition to explore the claims of wealth managers from previously unseen angles.

3. Workshop Segment

As musical performance, *Social Science Fantasia* has been presented at concerts, open mic shows, literary salons, and festival evenings for loop music. At Trans-Generatives 2030, we propose to expand this critical performative approach, directed at opening up social sciences research to wider audiences (Alvesson, 2020). Our interactive workshop inquired how the intertextual approach from this project can inspire further creative actions and sustainability oriented management education.

In this segment, Svenja Tams reported on student projects that use the above approach as inspiration. As part of an intercultural communication class, students conducted Listening and Dialogue Projects. Students were asked to generate a text through research that gives voice to marginalized or other invisible voices, which collectively maintain, disrupt and transform fields of inequality. They were also asked to produce this text by bringing it in dialogue with artistic forms of expression, such as music, visual art, poetry, role play, video, performance art, and more. Lastly, they were asked to perform and communicate this intertextual artwork/workart (Barry & Meisiek, 2010) to a wider audience.



Svenja Tams | svenja.tams@hhu.de



Mexican students combines collages and visual storytelling to tell about dialogue with theatre director, working across Mexico and Spain.

THE WAR ON MY PHONE (2018)



"It was horrible for me to sit there and watch all this propaganda, listening to their songs and seeing all the blood."



Portuguese student shares her dialogue with Syrian youtube influencer who shares his perspective as refugee.

The workshop opened a discussion about questions such as:

How can the use of dialogical arts-based methods engage creatively with social science concepts that inform awareness and action for human wellbeing and sustainability?

How can this approach reflexively change persons from subjects and readers of research back into co-creators and interpreters of their own experiences?

How can this approach strengthen the critical performativity of social sciences to scale these ideas and involve greater community participation and solidarity?

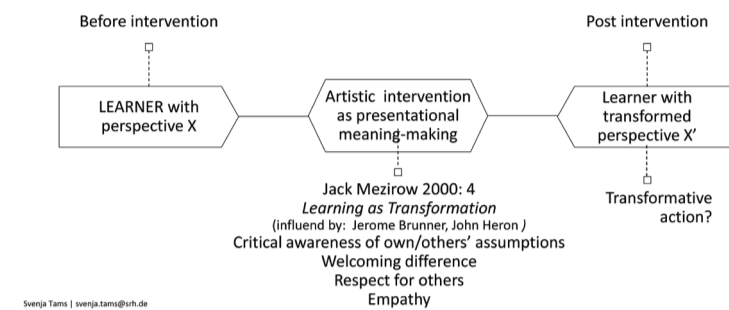
How can this dialogic arts-based approach serve as a tool for action research among workshop participants about ways to challenge fields of inequalities and generate new solidaristic forms of commitment, including the act of artistic engagement itself? (*The SAGE Encyclopedia of Action Research*, 2014.)

4. A little theory of art for transformation transgeneration

A little theory of arts for transformation

How should we evaluate the transformative power of art-based interventions? Can arts-based interventions be more than a liminal "bubbles..." to which we retreat, but which won't affect our capability to transform social realities?

Arts for transformation as transformation of individual-level frame-of-reference



Svenja Tams | svenja.tams@hhu.de

How to evaluate arts for transformation transgeneration?

Art is free to move through culture and time, to reverberate the outlines of a particular moment in history against others that are unmentioned.

Nora Bateson, 2016: 101

REFERENCES

- Adler, N. J., & Delbecq, A. L. (2018). Twenty-first century leadership: A return to beauty. *Journal of Management Inquiry*, 27(2) 119–137. doi: <https://doi.org/10.1177/105649261771075>
- Mats Alvesson (2021) Critical performativity in practice: the chronicle as a vehicle for achieving social impact, *European Journal of Work and Organizational Psychology*, 30(3), 355-362, DOI: 10.1080/1359432X.2020.1739744
- Barry, D., & Meisiek, S. (2010). Seeing more and seeing differently: Sensemaking, mindfulness, and the workarts. *Organization Studies*, 31(11), 1505-1530. doi: <https://doi.org/10.1177/0170840610380802>
- Heckscher, C., & McCarthy, J. (2014). Transient Solidarities: Commitment and Collective Action in Post-Industrial Societies. *British Journal of Industrial Relations*, 52(4), 627-657. doi:<https://doi.org/10.1111/bjir.12084>
- The SAGE Encyclopedia of Action Research*. (2014). doi:10.4135/9781446294406

Gentillesse au travail et impostures

Steve ORDENER, Sybille PERSSON, Hacem BOURNINE, Nadia BROCHOT

Résumé

Voir texte complet « Le théâtre forum pour accompagner une culture des comportements positifs au travail », sur transgeneratives2030.eu



Notre étude précédente (Ordener & Persson, 2022) sur les conditions de la gentillesse managériale (« *Workindness* ») a mené à discriminer entre cinq attitudes clés, chacune pouvant être « jouée » positivement ou négativement, ce que nous avons identifié comme cinq couples « postures-impostures ». La question abordée par cette nouvelle expérimentation est celle de la conscientisation (visualisation, compréhension et verbalisation) des cinq facteurs d'imposture à surveiller : le *statu quo*, l'indisponibilité, la pro-rentabilité, l'irresponsabilité, la perversion.

Le théâtre, et en particulier le théâtre-forum, pourrait-il aider cette prise de conscience ? En effet, en tant que technique de théâtre à vocation participative, le théâtre forum vise à l'origine l'expression critique des populations opprimées d'une façon ou d'une autre (Boal, 1972). Dès lors, il apporte sa pierre à une fonction d'éducation correctrice et de conscientisation d'organisation communautaire (Kidd, 1985). Dans le monde du travail, le théâtre forum peut servir à construire collectivement avec les salariés l'illustration d'une problématique psychosociale, et il a déjà été utilisé en France dans le cadre de projets de changement organisationnel (Debos, Cyrulnik, Boillot, & Lacroix, 2011).

Nous avons donc imaginé et écrit une pièce de théâtre, *L'Imposture*, sur le sujet de la gestion des relations humaines complexes au sein d'une agence commerciale de commercialisation de produits d'assurances et de placements. L'expérimentation a consisté en une séance de théâtre-forum dans laquelle les comédiens de la troupe les « Mots-Zélés » ont interprété une pièce courte, écrite autour des cinq facteurs d'imposture, dont l'épilogue serait catastrophique. Charge ensuite au public de réfléchir, de débattre et d'imaginer collectivement des solutions viables et praticables. La scène serait à rejouer ensuite autant de fois que nécessaire en modifiant le cours de l'histoire. Les spectateurs deviendraient alors acteurs et ils auraient alors la possibilité de venir sur scène et de remplacer un personnage afin de briser l'oppression, devenant des « Spect'acteurs » du changement...

POSTURE	IMPOSTURE
ORDONNER	LE STATU QUO
HUMANISER	L'INDISPONIBILITÉ
CULTIVER	LA PRO-RENTABILITÉ
PERFORMER	L'IRRESPONSABILITE
PERENNISER	LA MANIPULATION

RÉFÉRENCES

- Boal, A. (1972) Catégories du théâtre populaire, *Travail Théâtral*, p. 20.
- Debos, F., Cyrulnik, N., Boillot, F., & Lacroix, C. (2011). L'intégration du théâtre forum et son prolongement audiovisuel dans le processus communicationnel interne de sensibilisation au développement durable et d'appropriation de cette notion chez les salariés d'une organisation. *Communication. Information médias théories pratiques*, 28(2)
- Kidd, R. (1985). *From Peoples' Theater for Revolution to Popular Theatre for Reconstruction*, Toronto, 89 p.
- Ordener, S. & Persson, S. (2022). Workindness, de l'idéal théorique made in USA à une réalité viable pour onze entreprises lorraines, *Revue internationale de psychosociologie et de gestion des comportements organisationnels*, 73(28), 109-134

L'IMPOSTURE

Hacem Bournine (Comédien, Auteur et Metteur en Scène)
 Sarah Bournine (Comédienne et Co-Auteur)
 Serge Laly (Comédien et Co-Auteur)
 Steve Ordener (Co-auteur)
 Déborah Fafin (Comédienne)
 Pascal Napolitano (Caméraman)
 Audrey Ordener (Comédienne)

Les personnages

Samuel est un commercial très performant (meilleur chiffre de l'agence) mais également considéré par ses collègues comme le moins scrupuleux pour ne pas dire le plus véreux.

Déborah est une commerciale jeune, dernièrement recrutée, honnête, travailleuse, authentique, mais à qui il est souvent reproché ses retards.

How to Write a Successful Scientific or Commercial Proposal Using Science-Fiction Techniques

Jean-Claude DUNYACH

1. INTRODUCTION

First of all, I would like to apologize in advance for my terrible French accent. So please, do not hesitate to interrupt me if something is not clear or if you have a question or a comment.

Then a word of advice: this originally was a “semi-serious” presentation... At the end of the 1990’s, I wanted to talk about something that would cover all my activities, as an Ex Cerfacs member, as an Airbus research engineer dealing with European Commission Framework Programmes and, of course, as a science-fiction writer and editor – and I realised that I use regularly some of my SF oriented techniques in my research and Airbus activities.

I first had to write European proposals – it was in Cerfacs, in the early days, when we were frantically looking for money and contract to hire new researchers... It did not change that much? Well, then, I hope my talk will be useful to some of you.

2. EVERYTHING IS LITERATURE

Before going into details, a general remark: when you’re writing a document that is roughly longer than half a page, which has to be convincing, exciting and reassuring, all at the same time, you are doing literature. When there is an introduction or an executive summary, a detailed conclusion, you are doing literature. Like it or not, but there are no different ways to read a proposal that is written with complex sentences, detailed paragraphs and argumentation. You are not consulting a table of logarithms or an excel sheet, you are reading something that expose a reasoning, that tells a story. And that is literature.

So, literary techniques play a major role in your writing, like it or not. Every scientific publication is a fiction.

Besides, in twenty years, I’ve seen “storytelling” becoming a major asset in the research and industrial world. A proposal cannot anymore be a good idea exposed with the corresponding technical or business evidences. You need to tell a story.

I’ll illustrate some of the notions I’m about to present using the example of the James Webb telescope, which is one of the best storytelling event I’ve seen in many years.

3. GENERAL LITERARY TECHNIQUES

How can literary techniques help you? Well, there are some tips and rules everybody know and some that most of us forget. Let’s review them. A successful proposal must be:

- **Convincing:** it has demonstrable technical or business value, it’s realistic
- **Exciting:** it’s a new paradigm, it’s going to change the world
- **Reassuring:** we can do it, we have the technical capacities, just give us the money.

The problem we have is that these three requirements are in essence contradictory. It’s like convincing a person to ride on a roller coaster for the first time. Come on, it’s perfectly safe, it will be the breath taking experience of a lifetime and I will be there for you at the end, trust me. Go buy a ticket. It never worked for me! Bad feeling, if you catch my meaning.

So, literary techniques won’t be able to help you much on the reassuring part – your evaluators will rely on your expertise and on the technical or business proofs you will provide. However, they can help, to a certain degree, with the Convincing and Exciting part.

- Show, don’t tell. Illustrate. Paint the picture, don’t describe it
- Find the proper length. Density. Tell what is indispensable, not what is useful

- Dedicated vocabulary, rich, consistent
- Avoid acronyms at all cost (AAAAC)

The last sentence (AAAAC) is a good example of both the “avoid acronym” part (you were stopped dead on track by that and now you will need a minute to get back to the presentation). And it’s also an example of “Show, don’t tell.” I could have written “avoid acronyms at all cost,” which is “tell,” I choose to “show.” What is the most efficient technique, in your opinion?

4. SCIENCE-FICTION TECHNIQUES

Science-Fiction is different from other literatures in terms of information management. Most Science-Fiction books take place in a universe where almost everything is new for the reader. Even if many Science-Fiction concepts and objects (robots, time travelling machines, black holes or aliens) are now commonplace and don’t need to be explicated, the reality that is described is “non-mimetic.” It differs from your experience as a reader. So a Science-Fiction writer needs to provide the right amount of information while avoiding info-dump. If you provide too much information, you’re boring. Not enough, you’re cryptic and unconvincing.

There are four literary notions that are central to Science-Fiction writing that I find very useful when I have to write a scientific proposal to be submitted for funding – the European Commission being one of the main targets for such proposals. These notions are:

1. Suspension of disbelief
2. Sense of wonder
3. Characters you’d love to hate (or hate to love)
4. Objects of desire

Strange at it seems, these four notions that are not necessarily associated with your field of expertise can be key to a successful commercial or technical proposal. Let’s see why and how.

5. SUSPENSION OF DISBELIEF

5.1. DEFINITION

Suspension of disbelief can be defined as:

“The temporary acceptance as believable of events or characters that would ordinarily be seen as incredible.” This is usually to allow an audience to appreciate works of literature or drama that are exploring unusual ideas even if they are fantastic, impossible, or contradictory.

This term was coined by Samuel Taylor Coleridge in 1817, long before the

official birth of Science-Fiction, but it has been widely used in SF context. It refers to the ability a person has when engaging with a constructed object – film, a play, a novel, and of course a technical proposal – to repress their knowledge that it is a “mental construct” and respond to it as though it is real. Or could be...

Which is, of course, exactly what one expects when one is submitting a technical research proposal for funding.

5.2. HOW DO WE CREATE IT?

How do we create this “suspension of disbelief?” Several techniques used in SF could be applicable here:

1. Splitting: The whole idea behind your proposal is of course “at risk.” Neither obvious or easy – it wouldn’t be research – nor 100% guaranteed to success. To convince your audience that you have a reasonable chance to deliver what you’re promising, a SF writer would recommend splitting your research process into manageable chunks, each with an acceptable risk. Don’t concentrate all risks and difficulties in the same work package, don’t plant a mountain in your own garden. Build a succession of acceptable steps (or milestones), each with its own difficulties and adapted solutions, and plan your trek to the top accordingly. Your proposal won’t look impossible, just long and arduous.

And at some point, take a look around you and describe the view.

2. Picture yourself there: let’s suppose that you’re facing a particularly high cliff, dangerous and almost impossible to climb. A SF writer would quite often start by describing the wonderful view you would have from the top – and imagine how much easier the climbing path would look from there. Then, while the hero is suffering from all kinds of pain midway to the top, he would take comfort in the idea of the view waiting for him at the end of his journey. And the reader would believe in his capacity to find enough strength and stamina to reach his objective. More importantly, he would support the idea and secretly hope that the hero will succeed.

In a scientific proposal, describing the view from the top is something almost forgotten. Try it, believe me. It gives confidence to your evaluators, and even to your workers.

3. Use decoys: if something is really “almost impossible,” try to find an even more difficult, complicated, unreachable, goal. Describe it at large and present your project as an alternate, more acceptable solution – perhaps going partway to the goal. If you’re planning to terraform a planet plan for Jupiter and settle for Mars... It makes sense.

6. SENSE OF WONDER

6.1. DEFINITION

The term is self-explanatory, even for a scientist – the widening of the mind’s horizons is something we all experienced in our life. However, it is essential to remember that this very sense of wonder appears when one is able to translate from abstract to concrete and to add emotions to something purely theoretical. It has something to do with “faith” and amazement, which again are two feelings you would like your evaluators to get while reading your proposal...

There is nothing as boring as a technical proposal, except maybe a scientific article... I’m registered in the European experts database since more than 20 years and I participated to several evaluation weeks of proposals in various technical domains. This is a well-paid job but we deserve every euro of it, believe me. It’s by far the most annoying and frustrating experience I’ve had – even worse than reading the slush pile when you’re an editor looking for a good manuscript. I very seldom felt that “sense of wonder” while reading a proposal but I can guarantee that when it happened, the proposal was accepted!

6.2. SENSE OF WONDER – THE SF WAY

How does one add emotions to a mental construct? How do we help the reader – a scientific evaluator, for example – to be emotionally engaged with our scientific proposal? Let’s be frank about it. If the reader is a true expert in your domain, there’s not much you can do about it (except add his name in the list of major references but that’s pure luck). However, most of the evaluators are not true experts on your specific domain but in another one, close enough to yours. So it is possible to add a bit of glamour to your proposal.

1. Start with the big picture: Your project is just one little step in a long journey... Your contribution only concerns a small part of a big ensemble... You’re not that important in the whole process... Well, this is not how you will sell your proposal! Every link of the chain is essential, and yours is even crucial.

Describe what is globally at stake. Even if you’re working on a sub-system of a sub-system, start with the whole engine. Show pictures; describe what is expected on a large scale... You’re writing a dedicated subroutine for an entire library? Explain first what is the purpose of the library and, only after that, show why your subroutine is playing a key role.

2. Add a logo, a motto, or a splendid metaphor... An unforgettable characterization. You all know about computer viruses? About human resilience? You know that you can “just do it?” Well, these are successful examples of sales tricks that will help you sell your proposal. If you can associate it with a logo, with a short and punchy sentence, you’ll help to create that sense of wonder. It is not a matter of “style over substance” but a way to associate your research with something that can be easily remembered. And easily focused on.

The “splendid metaphor” is also a very useful thing if you can find one – be creative. It has its drawback – you might spend the rest of your life explaining it to various audiences – but if it illustrates properly your research and makes it “understandable” for the educated layman, it will be incredibly useful.

3. Use special effects (like in this presentation)

4. Exaggerate... Your proposal will change the world we live in. (No? Start again...) OK, you might eventually contribute to change a little the local environment you’re living in... That’s not too bad. Don’t forget to mention it, explain it, insist on it – no, it’s not true exaggeration, but just an honest feeling of importance. You must look convinced, otherwise you won’t be convincing.

Don’t reduce the difficulties. See Caesar

5. At the end, expand your horizon! Let me illustrate that with an example.

In 1953, Francis Crick and James D. Watson published an article that is considered as one of the most prominent biology articles of the twentieth century. It was short (one dense page in the scientific publication Nature), beautifully written, and described the double helix structure of DNA.

The article was entitled “Molecular Structure of Nucleic Acids: A Structure for Deoxyribose Nucleic Acid,” which is not exactly exciting except for a few biologists. It start with promises – which is always good if you can deliver. But, there was a couple of sentences – at the very end of the article, that said:

“It has not escaped our notice that the specific pairing we have postulated immediately suggests a possible copying mechanism for the genetic material.”

That, my friends, is Nobel Prize material... What it means is: our results are not only brilliant... they open a new and very promising field of research that should keep up busy for the next fifty years. It was true, by the way.

And we, the scientists who wrote the article, were the first one to anticipate that. Brilliant career move!

If your research proposal, once achieved, might lead to something even bigger, or simply would require a follow-on that will expand our horizon, you give to the evaluators a good reason to fund you. This is only the beginning is always a catchy phrase.

7. CHARACTERS YOU’D LOVE TO HATE...

There are no characters in a scientific or business proposal, of course. Well, sort of... There are results; even products sometimes, and there are effects on people. If your proposal doesn’t have any effect on people, you’re doomed. To be funded, you have to convince the evaluator that he will live in a better, more exciting, world in the end thanks to your research work. Which means that he has to be emotionally involved somewhere... I remember a colleague who explained how his electronic circuit model worked by playing the role of an electron!

An alternate solution is to explain that your proposal will give birth to a new breed of... subroutines, publications, experiments, deliverables, whatever. These are perfectly legitimate characters, if you’re a scientist. For us, an operating system is the equivalent of a mate – we usually spend more time with our computer than with our spouse. And we talk a lot more to it, too.

7.1. A FEW LITERARY TRICKS

Characters can be good or bad, evil or cute. It is the same with scientific results. You’re not supposed to become emotionally involved with your algorithms, or to develop a special feeling for the content of your Petri dish. However, you’re human – and so is your evaluator. You have pet projects, preferred microscopes or theories you hate. When you’re writing a proposal, a little emotion doesn’t hurt.

Besides, products or artefacts – useful or dangerous – can usually be created from your research. They are acceptable replacements to characters. After all, C3PO or R2D2 are characters, aren’t they?

1. A good result has an emotional side: If you’re explaining at large the wonders of your theory and get the answer “so what?” you’ve failed. The abstract beauty of a result is usually not sufficient to get funding. It has to become “real” to attract money.

Adding emotion in a technical proposal is a terribly difficult task, essentially because a scientist naturally refrains from showing his emotional side. However, if you interview one about his pet project, you’ll hear emotion. Just capture a few sentences, a paragraph or two, a bit of enthusiasm, and write that down in your proposal. It’ll help. And of course, we’ve seen pictures of wolves of Wall Street getting all sexually excited about making money.

2. If it’s difficult, you’ll be a hero: Someone has to do the work. It is not simple; it requires talent, creativity, intelligence, concentration and hard work. Don’t forget to identify what could turn bad – and show that you are prepared. It’s not only risk analysis, it’s a state of mind that you must demonstrate.

Besides, you’re not new at it, you already achieved a project or two, I’m sure. So you’re the cool, mature, fully experienced, kind of hero every writer would love to write about? So do it yourself. Add a bit about yourself. Blow your own horn.

I’ve mentioned Caesar before. In the entire history, he is one of the successful ones.

3. Side effects can be wonderful sidekicks: Let’s pretend you’re Tim Berners-Lee at the turn of the nineties. You’re trying to sell the idea of a communication protocol and language that would facilitate the creation of interactive “pages” on the internet, with text or graphic content. An interesting side effect is that, a few years later, pictures were responsible of 90% of the traffic (now it’s videos) and nobody had foreseen at that time that most of the pictures (and videos) would show naked people!

So the idea you’re selling has potential side effects. Be creative and imagine some. Good side effects are a plus, of course, and you can list them without being accused of exaggeration (they are “potential” effects, neither you nor your proposal are responsible if they fail to happen). But identifying potentially bad side effects might be even better – it often means that the people are heavily using your idea (usually in a weird way but again you’re not responsible for that). There will be room for another proposal trying to improve that. And everyone loves a villain! Those are the “characters you love to hate” and they help your proposal to break out of the pack and be remembered.

8. OBJECTS OF DESIRE

What, in your proposal, is an object of desire? A well-balanced sheet is not exactly my kind of OOD, but a nice car with smooth curves resulting from your algorithm simulating aerodynamic flows could be – so don’t forget to mention the car in your proposal. A more efficient process is an abstract concept not necessarily associated with desire, but a team of motivated engineers challenging your best expectations is. They are winners! Talk about them.

The James Webb telescope is of course an object of desire. But is it? Come to think of it, it’s just a very complex device that will provide better pictures (not beautiful ones, though) of distant galaxies to be used by astronomers and astrophysicists. It’s a very specialised tool, with limited impact on the general public. However, the people at NASA turned that into an epic adventure! That’s excellent storytelling for you.

9. A FEW DON’TS

- Avoid “info-dump”
- Don’t lose yourself in too many details
- Don’t lose your evaluators in a jungle. They need to see where this is going!
- Don’t be negative.

– Honesty is not always a good policy
– Don't forget to start with nice promises that you intend to fulfill

10. CONCLUSION
Finally, remember that: Every scientific or business document is a fiction. Our goal is to make it a better, more exciting and convicting fiction, without losing its intrinsic qualities.

A proposal is also a work of art. A bit of humour, a couple of witty sentences, a quotation that help seeing things from a different perspective, can help.

I was once in charge of a small project called “Verification, validation and accreditation.” This project has started to implement a process that will help the certification authorities to believe that our simulation tools are of good quality, accurate, and well adapted to what they are simulating. Of course, everyone knows that it is already the case, so why bother? Why do we need to fund a project like this? I’ve found the perfect answer in the form of a quote from Yogi Berra, who was a famous American Baseball player and team manager. He once said, “In theory there is no difference between theory and practice. In practice there is.”

This sentence probably helped our proposal to be accepted. I hope you'll find your own inspiration in a science-fiction book, somewhere!

11. AUGMENTATION
The followings are the workshop application (augmentations) imagined by the participants, applying fiction techniques to their research and practices:

INTENTIONAL AUGMENTATION INDIVIDUAL

Decide how to make exhibition proposals to the Statue of Liberty.

Invite Jean-Claude Dunyach to write scripts.

Decide how to explore surrealism in art, climate science and mathematics (finance).

Decide how to complete my research proposal.

Read, for links to personal lives, Eugene Linden's *Fire and Flood: A People's History of Climate Change, from 1979 to the Present*.

Consider how to contribute/partner/relate with ICN.

Explore further performance and music collaborative transitions. As well as print making transitions.

Pursue the upside down.

Explore connections between Circular Economics and Circles for bubbles, trillions, trillions, and trillions of \$\$\$, balls, the O of oxygen, the O or H2o, the moon, eyes, and other motifs.

INTENTIONAL AUGMENTATION ORGANISATIONAL

Decide how the Trans-Generatives network should promote itself to: Climanosco. https://www.climanosco.org; Earth Day. https://www.earthday.org/earth-day-2022/; UN Decade of the Oceans; Foundation Prince Albert II de Monaco; ArtAsiaPacific, etc.

Define how international learning – by people, professionals, ordinary people and citizens (and children), led by art – works.

Explain everyday practices in terms of personal lives, that are not designed.

Differentiate science, technology and art thought and thinking.

Explain temporality in sustainable development, in changing visual culture and culture change.

Create Sustainable Development Visual Culture.

Use art to connect governance to people

INTENTIONAL AUGMENTATION COLLECTIVE

Explore bubble workshops, for finance, fishing corporations & fishing cities, connecting ordinary people, professional people, people, and citizens in Brisbane, Boston, Boulogne sur Mer, Copenhagen, Hiroshima, Leticia, Pontevedra, Portugal Said, Reykjavik, Trømso, Venice, etc.

Find story tellers in art, science and functional realities.

Create an open source data bank of trans-generative “definitions.”

Explain ethics of personal lives in Sustainable Development Climate Justice.

Create involvement with inclusive, diverse, and participatory contributions from ordinary people as well as from social, natural and other sciences.

Petites libertés sous contrôle

Récits assemblés et liés par Ketty STEWARD

Filip, à 120 ans, était jusque-là plutôt en bonne santé.

Ce matin, il a senti comme un grincement dans son dos au moment de se réveiller et il se demande s’il ne serait pas temps de faire son autobiographie. Le programme d'autobiographie guidée est accessible à toute personne à partir de 90 ans, qui en fait la demande. C'est une aide précieuse et reconnue pour lutter contre la dépression.

Filip sourit en pensant à tout ce qu’il n’a jamais raconté à ceux de la maison communautaire où il s’est installé pour vivre sa retraite ; ces gens qui partagent sa vie actuellement, mais aucun des secrets qu’il va peut-être explorer dans le programme. Beaucoup ignorent, par exemple, qu’il est un homme trans et qu’il a dû, dans sa jeunesse, faire face à des menaces concrètes sur sa vie et son corps. Il n’a jamais rien dit non plus de la variété de sa vie professionnelle et des périodes de chômage qui lui ont permis, à chaque fois, de se former, de se renouveler et d’aller dans une direction nouvelle.

Son plus grand secret, cependant, reste sa participation à la création d’un synthétiseur de viande, une aberration à l’époque où la plupart des gens acceptaient de ne plus se nourrir d’animaux morts. Filip avait conçu la machine, pour un usage familial. Elle parvenait, à partir des déchets organiques de la nourriture et de prélèvements réguliers de tissus des membres de la famille, à fabriquer une viande tout à fait acceptable. Les accusations de cannibalisme et les attaques des hygiénistes avaient condamné le produit, mais Filip s’était assuré une retraite confortable en donnant dans le trafic de viande à petite échelle.

Bon, ça, il ne le mettra pas dans son autobiographie. Les psychologues qui le liront ont beau être tenues au secret professionnel, elles ont l’obligation de dénoncer les crimes et délits de cette gravité.

Filip soupire et décide que, finalement, il peut attendre encore un jour ou deux avant de replonger dans son passé. Le futur lui semble bouché, mais le présent... Ah ! Le présent ! Que de possibilités s’offrent à lui pour profiter de l’instant !

Il opte pour une séance de MIS.

Les Médias d’Immersion Sensorielle permettent de vivre pendant une heure ou quelques minutes la vie, les émotions et sensations d’autres individus.

Certains MIS sont entièrement créés, scénarisés par des professionnels du spectacle, pour le divertissement des immergés. D’autres sont des enregistrements bruts de tranches de vie de personnes forcément volontaires pour ainsi s’ouvrir. La plupart des MIS mélangent ces deux formules, une sorte de Télépathie-réalité : vies d’humains, de programmes ou de robots, bouteilles à la mer, rêves éveillés, instants volés...

Filip enfile le casque. Il adore plonger ainsi, cesser d’être lui, vieillissant et désœuvré.

Il lance la lecture d’une sélection pseudo-aléatoire calculée à partir de ses immersions précédentes et qu’il pourra infléchir au moyen de mots-clés.

La catégorie « portraits », une de ses préférées, lui permet de découvrir des gens. Pas des héros, pas des gagnants. Juste des gens ordinaires qui lui ressemblent parfois.

Kiva, las'
Je m’appelle Kiva12349, je suis né en octobre 2019 à Brétigny-sur-Orge dans un entrepôt d’Amazon, mon propriétaire. Je suis ce que l’on appelait une navette autonome, destinée à déplacer des palettes dans un espace de stockage. Pendant la première partie de ma carrière, j’aidais les humains à préparer des commandes pour le e-commerce. Pas franchement palpitant quand j’y repense ! Après les inondations géantes de 2037, j’ai été racheté par une poignée d’optimistes qui voulaient changer le monde en repensant les flux. J’ai atterri ici, au pied des Pyrénées, côté atlantique. Il paraît qu’il y a très longtemps, c’était aussi une zone libre, en marge de la guerre de Cent Ans. Les techniciens de la communauté m’ont

¹ Christine

débridé, ils ont libéré mon intelligence. J’ai pu choisir une inspiration, j’ai choisi R2D2 : c’est pratique un servomécanisme capable de survivre à plusieurs conflits intergalactiques ! À vrai dire, ici, je ne pilote pas de chasseurs X-Wing, je contrôle l’organisation des flux de la zone géographique qui m’a été affectée.

Les échanges avec l’Espagne toute proche par les capsules pneumatiques au long des torrents, les gros volumes dans les trains à crémaillère. Et ici en plaine, la mise en mouvement des marchandises se fait via mes anciens collègues, tous équipés de panneaux solaires fabriqués à partir d’un dérivé du marbre qui abonde dans la région et que nous utilisons en quantité infime. Peu de robots sont dotés d’une intelligence comme la mienne et nous vivons en harmonie avec les humains.

Moi, tant qu’ils me permettent de scanner inlassablement les pages des livres qu’ils ont sauvegardés, je ne vois pas pourquoi j’en demanderais plus.

Les hommes ici écoutent la nature, consomment des végétaux, des racines, des algues, des insectes. Les dissidents qui m’entourent ne cherchent plus à valoriser à toute force leur mode de vie. Au gré de dizaines de milliers d’expériences comme la leur, la planète a pu survivre et les hommes avec. Les poches d’ultra-capitalisme qui perdurent sont encore vivaces, mais isolées, perdues dans leur rêve de contrôle suprême, de technologie surpuissante, de refus d’alimentation et de vie éternelle. Ici, dans les vallées glaciaires millénaires, on a réinventé l’agriculture raisonnée, changé les modes de calcul de performance.

Lair sent la neige qui est revenue l’an passé, une odeur pure, blanche qui me rappelle le vide intersidéral. Il paraît qu’hier un enfant a pleuré. Les hommes ont l’espoir qu’un jour, ils pourront retrouver le goût doux-amer du malheur.

Filip s’immerge aussi, quelquefois, dans des MIS produits dans d’autres langues. Mais il y passe plus brièvement, car il préfère ne pas avoir à se concentrer. Il aime se laisser porter par des signaux qui, une fois qu’il a atteint un état proche de la transe, ne lui semblent ni langagiers, ni visuels, ni sonores. Il se sent pris dans la pensée d’un autre et cette expérience le repose de sa propre compagnie. Il sélectionne l’anglais.

Free Topo²
Until my research was widely diffused in November 2060, residents like Topo were marginalised by society as they refused to accept the sex they were given at birth. Since 2030, health authorities maintain strict control over sex statistics by establishing quotas that respect female/male equal representation over geographic space.

When Topo was born in 2030 s/he was attributed the male sex in rural territory 5790FF. According to state plans, there would be a need for more males in 2055 in the territorial daycare centre.

However Topo since birth had never defined self through sex, and the elders who raised Topo had never paid attention to this attribution. Since the publication of my research revealing that sex does not have an impact on competencies and therefore job requirements, Topo is free to be ‘self’.

La liberté n’a plus grand sens en 2060. Elle consiste généralement dans la découverte d’un interstice non contrôlé de son existence, une minuscule marge de manœuvre et l’impression, pendant une minute, pendant un jour, une semaine, de pouvoir décider pour soi.

Filip aime cependant entendre ce terme de la bouche de ses contemporains et goûter avec eux la joie qu’il procure. Il demande : « Liberté ».

Bella Ciao³
Aujourd’hui est le plus beau jour de ma vie ! J’en crois pas mes circuits ! Je vais participer à une réunion de groupe de la communauté « Bella ciao » de façon officielle ! Plus besoin de me cacher, de me déguiser en humain pour rejoindre ma communauté de cœur (je sais, je n’ai peut-être pas de cœur, mais j’ai des sentiments !)
Bien sûr, il faut que je m’acquitte de mes

² Krista
³ Élise

tâches quotidiennes : prendre soin des vieilles personnes et animer les cours de l’école virtuelle. Dès l’aube, être au service des autres. Ce travail forcé m’épuise. Mettre de l’huile ne suffit plus, je ressens une usure, un épuisement aussi bien dans ma chair (oups ! encore un mot qui m’est interdit) que dans mes synapses. Je soupçonne mon concepteur de ne pas connaître la loi contre l’obsolescence programmée.

Mais revenons à nos moutons ; qui n’en sont pas. Je parle des chercheurs révolutionnaires de la communauté « Bella ciao » : Mia, Vale, Mika, Élise, Olivier. Quel engagement ! Grâce à leurs travaux, nous pouvons enfin robots, hommes, extra-terrestres, passer officiellement du temps ensemble pour travailler sur des projets communs. Les problèmes techniques liés à la langue ont été résolus depuis belle lurette, ce qu’il restait à faire, c’était arriver à faire comprendre à l’État que ces rencontres étaient bénéfiques pour traiter des sujets de société qui nous préoccupent encore aujourd’hui. Je vais enfin pouvoir partager toutes mes idées sur les façons de limiter ce réchauffement climatique qui ne fait pas de bien à mes rouages. Les xtraggs sont en avance sur ce sujet, nous allons pouvoir profiter de leurs connaissances.

Bon, il faut que j’y retourne, j’entends les sirènes de la Police. J’espère qu’un jour, grâce à nos chercheurs révolutionnaires, ils comprendront l’intérêt de coopérer avec les furtifs... mais, une chose à la fois. Anthilus, le robot ex-hors-la-loi 😊

Voyager n’est plus possible, mais Filip sait qu’il peut, en immersion, rencontrer des habitants du monde entier, les voir, en pied, comme s’ils se tenaient debout, face à lui. Comme il n’a pas spécialement envie d’intervenir, il choisit un entretien enregistré. Il le voudrait récent. Du jour, si possible. Il répond « Oui » quand l’application lui propose une information tirée de la feuille du matin même.

Rosamunda⁴
À la une dans le journal végétal qui tombe du ciel comme tous les matins : interview de Rosamunda, l’héroïne du Nouveau Monde sans huile de palme

Rosamunda, comment vivez-vous votre soudaine notoriété, vous, petite fermière brésilienne, sans emploi depuis des décennies, vouée à une pauvreté dictée par l’extractivisme dominant de nos systèmes de production ?

J’accepte simplement ce passage brusque d’état : j’étais invisible, je n’avais pas de voix, j’avais juste des bras pour ramasser les fruits de notre Mère la forêt Amazonienne. Je n’existais pas. Aucun français n’avait jamais pensé à moi en savourant sa tartine au Nutella. Et pourtant j’étais à l’origine de cette crème délicate et mortifère en même temps.

Aujourd’hui ma photo est dans votre journal, ma voix est entendue par vous tous qui êtes dotés de cette microradio encapsulée dans votre oreille... Je suis la gardienne de la nouvelle parcelle amazonienne, j’accompagne l’éclosion des nouvelles variétés qui ont poussé magiquement autour des palmiers que vous les Occidentaux ne vouliez plus, des nouvelles semences qui sont devenues patrimoine de l’humanité... pour un champ unique de soja (désormais banni de notre alimentation) nous avons 3000 parcelles multicolours, multisaveurs, la permaculture est la seule forme d’agriculture permise aujourd’hui au Brésil.

Comment passez-vous vos journées ?
Je me lève avec le soleil, je regarde les oiseaux voler sur ma tête, ils m’accompagnent dans mon tour du matin : je salue les nouvelles plantes, je soigne les plus âgées, je recueille ce que la parcelle amazonienne m’offre...

Je rentre dans mon petit logement, au frais, dans la forêt, je prépare mes épices, mes bouillons, mes « potions magiques », comme disent les enfants qui participent à mes ateliers de l’après-midi. Pendant nos ateliers « milieux », nous nous promenons, nous nous émerveillons de la beauté, de la pureté, de la fraîcheur retrouvée. L’Amazonie est vivante ! Nous sommes l’Amazonie, lui appartenons, elle nous

⁴ Valentina

sûreté : je n'ai pas besoin de vous préciser qu'il y'en a plus d'un qui s'effondrent. Je prends le contrôle de l'une des caméras du poste pour zoomer sur son visage.

Un homme comme tous les autres. Même teint blafard, sûrement pompé au liquide 200, les cheveux rasés de près à la mode du moment. Il est en pyjama sous son pardessus, encore trempé par les pluies. Ils ont dû le tirer du lit au début du service, ce matin à 5 h. Un petit tour par les fichiers du poste et je parcours le procès-verbal.

Ce n'est pas n'importe quoi, que de fricoter avec les réseaux. Depuis l'avènement des comités, le participatif règle tout, je suis bien placé pour le savoir.

– Je ne sais pas pourquoi mon nom figure là-dessus, il a dit.

Ma lecture des précédents : Il ment à 87,6 %. Ce que je fournis aux douze que l'on a fait venir ce matin pour statuer. Ils appuient sur le bouton bleu, forcément. Veulent plus d'informations. Et j'ai un doute, moi aussi. Je ne me l'explique pas. Ils veulent bleu. J'hésite, je joue la chaleur, je ne lance rien. Et je leur colle un vert. L'homme peut partir. C'est un coup de tête, vraiment. J'ouvre les menottes, les portes, et je regarde, toutes caméras requises.

Tout le monde se détourne des fenêtres.

Contexte de production de ces récits

Nous sommes embarqués dans un voyage dans le temps, vers le futur, à la vitesse d'une seconde par seconde. L'activité de recherche demande, elle, de se projeter un peu plus vite, un peu plus loin, de se forger une vision du futur. Pour les domaines qui, comme les sciences de gestion concernent les activités humaines, c'est même une nécessité.

Or nous ne disposons pas de machine à voyager dans le temps. Pire encore, nous sommes conscients, pour avoir vécu la récente pandémie de Sars-Cov 2, de notre difficulté à nous forger des certitudes sur ce qui vient.

Ne nous reste donc que notre imagination et notre accès aux connaissances du présent.

La littérature de Science-fiction se situe à l'intersection entre l'imaginaire et la science du réel. Elle permet, dans sa composante « anticipation » de concevoir ce qui est là, mais pas encore tout à fait identifié, ce qui n'est pas encore là, ce qui pourrait advenir, probable ou surprenant, comme dans un laboratoire du temps.

Sans prédire, la science-fiction permet de dire et de rêver ce qui nous meut, tout en éclairant d'une lumière nouvelle ce que nous faisons.

Ces récits ont été produits durant l'atelier Sciences-Fictions de Gestion s'étant tenu le 15 décembre 2021. L'atelier, animé par Ketty Steward, écrivaine de science-fiction, Présidente de l'association Réseau Université de la pluralité, diplômée en sciences du travail et doctorante en psychologie, se proposait d'apporter les outils de la fiction pour imaginer nos recherches dans l'incertain de l'après Covid19.

L'atelier s'inscrit dans le projet #OWEESF Imaginales, qui vise à faire dialoguer science-fiction et sciences de gestion autour des imaginaires du travail. Il était soutenu par le Laboratoire CEREFIGE (Université de Lorraine), représenté par Jean-François STICH et Philippe MAIRESSE, et le Research Group on Collaborative Spaces (RGCS), représenté par Aurore DANDROY.

Dialogarchitecture for a Sustainable Future

Hans-Juergen FRANCK

THE UNDERLYING COMMON PATTERN BEHIND CURRENT CHALLENGES AND THE POWER OF ARTISTIC PROBLEM SOLVING

How to deal with a growing number of overlapping crises? Often it is not about missing technical possibilities and not about a lack of financial means (Lüpke, G., 2009). But always it is about interconnections on many levels being the basis for a common political will to respond to challenges as well as for personal and collective decision making. Apparently everything has got to do with everything. (Lotter, 2020). Indeed everything is part of our one whole system we are all belonging to. Key are relationships between different interests and views, different cultures, various beliefs and religions, different social levels, diverse disciplines and professional languages, different scientific, economic, ecologic and artistic views and systems (Frank, 2021 b). This needs dialogue, sharing and action on many levels: in the “in-between” between human beings and nature, technical and manual, personal and virtual processes (Frank, 2007), between different value systems, between the younger and the older generations etc. Crises and challenges cannot be mastered isolated from each other and without considering a multitude of interconnected perspectives like art and science. “Impactful actions for a sustainable future through art and science” need “relationships, crosscutting, transdisciplinary, inclusiveness, participation, integration, understanding” of ecosystems and co-production¹. What can artistic approaches contribute?

The former German minister of culture Dr. Monika Grütters once said that artists have the capacity to think and feel what is behind and above things. This higher dimension can generate the link and glue between different cultures, contrasting interests and can help to overcome silos in companies, organizations and society. This artistic quality introduces into problem solving a strong confident view of the world as a whole. Interconnections and relationships can become visible and present in artistic processes. The in-between between different experiences, different people and different value systems becomes the place where novel solutions can emerge and find power for implementation into reality guided by common responsibility. Art and science work hand in hand through the conviction that different crises are not isolated labels of themes but are interconnected in a network of multiple challenges showing different factors and their influences on each other.

FROM ARTISTIC PRODUCTS TO ARTISTIC PROCESSES: PROJECT EXAMPLES FROM INDUSTRY, POLITICS AND CIVIL SOCIETY

When we talk about fine arts most people think of objects like paintings, sculptures, drawing etc. These artifacts are the products of the artist's work. They show a certain aesthetic quality in its form. They can be exposed and presented in an art gallery, in a museum or at home (Frank, 2021 b).

In this contribution we are talking about a different perspective of art which is far less popular in our society: we apply art as a process. We use the procedures artists, inventors, architects use when they create the “new.” This artistic approach works here more in a sense of the Social Sculpture conceived by Joseph Beuys seeing every human being as an artist who can take part in shaping projects, society and change. Pr. Paul Shrivastava (2022, Trans-Generatives 2030 introductory speech) tells about: “the need for transdisciplinary work, integrating

humanities, arts, and new imaginaries, for a more holistic design of the future” and the interest of “arts-based approaches for accomplishing difficult and complex tasks in organizations and group settings.” He concludes: “Integrated rational and aesthetic approaches to problem solving have much to offer for transformation to sustainability.”

We have implemented the concrete artistic problem solving processes in various companies, international organizations, civil society and governments during more than 25 years. This led to novel solutions with a dimension of collective responsibility in highly complex environments. Examples from industry, politics and society include the development of a Management Information System (MIS) for a multinational automotive company (Drosdol, J. & Frank H.-J. 2005 a). A strategic decision making space for a group of companies (Frank, H.-J. & Lehnemann, M. 2014 b). A virtual remote collaboration space for public private partnership between a government and a multinational company (Frank, H.-J., Maak, T. & Pless, N.M. 2021 a). The development and implementation of new products with social and ecological impact. And the three months leadership development program “Ulysses” of PricewaterhouseCoopers (Pless, N.M., Maak, T. & Frank, H.-J. 2022), during which about 20 business leaders (PwC partners from all over the world) have been sent seven times into projects in developing countries, with teams of around 4 PwC leaders serving in about 30 projects, all actors using an artistic collaboration space.

All these projects used artistic processes to master complexity, to create overview in challenging situations, to work with interconnections finding “red threads” and patterns for the development and implementation of solutions through visual dialogue between different interests and through active aesthetic participation of a large number of stakeholders.

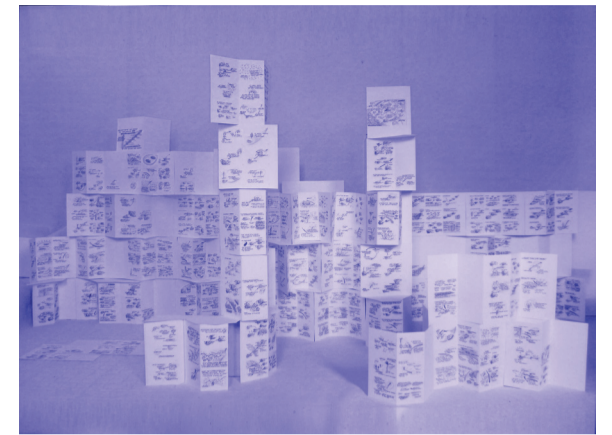
THE DEVELOPMENT OF THE “DIALOGARCHITECTURE FOR A SUSTAINABLE FUTURE”: A TOOL FOR HOSTING ARTISTIC PROBLEM SOLVING

Here we reflect on how to leverage the former experiences from the project level to a broader level of global crises. The previous examples use artistic problem solving processes to develop solutions in concrete projects for specific tasks and challenges. Instead, “Dialogarchitecture for a Sustainable Future” is a tool for defining new tasks leading to new projects. It creates an environment to facilitate diverse interconnections between a large number of factors relevant for problem solving.

The “Dialogarchitecture for a Sustainable Future” emerged from “Visual Online Conversations.” In a spontaneous way we talked about current challenges with personalities from different professions, social levels and various cultures, from several countries and continents. During these conversations, we used live drawing to facilitate the dialogue. This helped from the start to realize a continuous artistic process in real time. A number of scientific experts, artists from different fields, company leaders and staff, as well as activists from NGOs, coaches and psychologists have brought in different perspectives. Thus we got a visual overview and a lot of interlinks between different views regarding current challenges in our world. Our aim was not to create a comprehensive representative or scientific study but we realized a more artistic approach. We asked the interviewed people to talk to us spontaneously and not to prepare anything beforehand. It was a kind of visible “fever measurement” showing the present atmosphere in our societies. The leading questions were: What are major challenges that touch us most at the moment? Can we see some points where these challenges are linked together and influence each other? The output of these “Visual Online Conversations” was a large number of drawings put together one beside the other on the walls.

The overall image structure of the “Dialogarchitecture for a sustainable

future” shows the relationships between multiple challenges and between different disciplines in a kind of network of images making human and environmental needs and requirements concrete. This helps to situate different experiences, questions and inputs at the appropriate visible places in this space. An overview over a large number of factors and their connectedness facilitates the co-creation of ideas in a sense of collective responsibility in the “in-between” between different visualized knowledge elements. This offers a common workspace connecting arts, natural sciences, humanities, social sciences, business management, human ecology, architecture, film making, design and others.

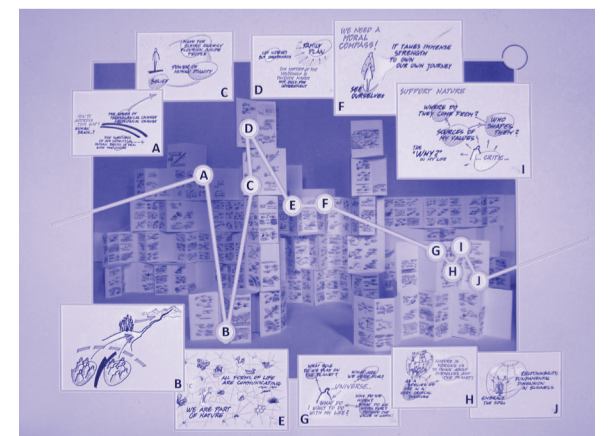


WORKING IN THE “DIALOGARCHITECTURE FOR A SUSTAINABLE FUTURE” AND ITS QUALITY AS A “COMMON VISUAL BRAIN” AND A “COLLECTIVE VISUAL MEMORY”

Imagine you could walk through your company's brain, through the memory of a society or through the collective brain of different cultures (Frank, H.-J. 2014 a). This is what happens in the “Dialogarchitecture for a sustainable future,” in a kind of “common visual brain” and “collective visual memory.” It looks like a “walk-in storyboard” (Pless, N.M., Maak, T. & Frank, H.-J. 2022). You visualize different thoughts. You realize relationships that make sense to you. You understand different concerns and inputs, showing know-how, best practices, failures, hopes, successes and visions as well as fears, sorrows of various human beings from several countries and continents, shaped by different cultures and values, by diverse professions and professional languages, by contrasting views and interests, by different social levels and corporate hierarchical positions. Different degrees of information depth and qualities, more or less focusing on specific selected perspectives are incorporated in this large context. Here you can situate yourself with your experiences and your knowledge at the right place beside familiar persons, matching common perspectives, connected to fitting knowledge elements or contrasting other opinions for discussion. This offers a dialogue platform and a common work surface for co-creation and problem solving in a sense of eco-systemic overview mastering the whole complexity even in the insecurity of a VUCA (volatile, uncertain, complex, and ambiguous) world (Pless, N.M., Maak, T. & Frank, H.-J. 2022).

The development of this kind of “visual memory” was triggered by the observation of human thinking. In contrast to the physical brain which is only present in one person's head, the artistic dialogue space is available for all participants at the same time, displaying what normally is hidden in the people's head. Thus, a “visual project memory” or “corporate or collective visual brain” shows a common basis of information, knowledge and experience which can be shared by a large number of participants. They can walk around, share opinions, ideas and knowledge, and can work on knowledge patterns, which are emerging in a visible structure. In the “in-between,” ideas for solutions can be developed in relation to a wider network of factors and their influences on each other (Frank, H.-J. 2014 a).

This is possible through the drawings made from the conversations, or from workshops and online conferences, which can be connected to visible “key patterns” of relevant insights, “red threads” showing important themes or “tracks” of common questions ...



Important elements are not isolated from each other and are available in this “Knowledge Architecture” for every participant at any time of the process. This systemic view incorporates scientific and personal knowledge, relationships, trans-disciplinary, participation, understanding of ecosystems and co-creation with communities. These different qualities enable systemic thinking in problem solving and creative

¹ UNESCO Chair ICN, Trans-Generatives 2030 call for action, 2021.

processes relevant for generating and implementing new solutions (Pless, N.M., Maak, T. & Frank, H.-J. 2022). It opens a wide range of possibilities. Here we can develop novel solutions and launch new projects, initiatives, products or strategies. We can work on conflicts or prevent them. This creates an inspiring environment in the visual context of a holistic view of our world. In the “in-between” between statements and experiences, analogies emerge often with ease and ideas for solutions and their implementation come forward with concrete results. The diversity of opinions and the experience that it is possible to accept opposite positions in one common visible story, which was created and agreed on by all participants, is linking all stakeholders for one collective effort. This quality is key. Changing opinions or new aspects are not “swept under the carpet.” They are expressed in drawings and located in the space actualizing the common story at any moment in real time, always visible for all participants. This space and process works for developing new solutions in project teams as well as for the individual search of purpose.

PATTERNS OF KEY CONTENTS

The live drawings from the “visual online conversations” about global and local challenges and about urgent crises show a lot of experiences, best practices, ideas, hopes, descriptions of difficulties, sorrows, reports of problem solving activities, challenges, factors of crises etc. In a first phase, the drawings are put together on wall elements forming six main patterns:

Current Situation & Responsibility

The historic challenge of the modern human society shows us that we have responsibilities today, which are reaching far beyond our time and our space. What do we need for coping with this challenge?

Opposits

In our global world we are confronted with different views and opposite interests. The gap between rich and poor is widening. Key is to find ways to co-create collective stories, which incorporate opposite positions and different believes. What to do in an environment where almost everything seems possible and ethical systems break into pieces?

Dialogue

Dialogue is vital in a global world with different cultures, contrasting interests and different value systems. We are more and more confronted with hostile, unforgiving and aggressive groups. This creates insecurity in our societies. For many people it is more and more difficult to recognize fake news. Dialogue needs openness, active listening and stepping into the other shoes and has to lead towards collective action.

Interrelations & Sensemaking

We are all part of one world. This understanding is leading us beyond crises. To find the sense of our life is key. Interrelations between different cultures and interests have to lead to common sense making.

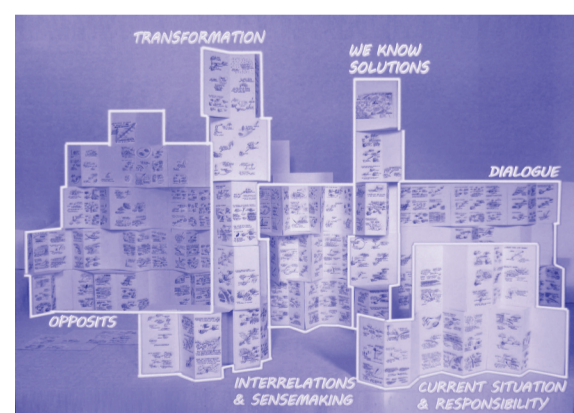
Transformation

Yes, there are role models and examples as well as lots of successful approaches to solve current problems. From these examples, we can learn for fundamental change.

We know solutions! Why don't we do it?

Many examples show how to find and implement solutions.

Quite a number of our dialogue partners said that they could not understand why human beings and their societies do not work effectively on solving urgent problems and challenges in our world



These contents shape the most striking patterns. They give the first structure to the “Dialogarchitecture for a sustainable future.” In a kind of “Quick tour” we can talk about it. Then we can go deeper into the contents, we can collect further information, work on questions or on ideas for solutions and complete the structure with further live drawings in the artistic problem solving processes. “Dialog Walks” through this visual work space start the co-creation together with the project team, participants and experts, decision makers and stakeholders. New key patterns and red threads for solutions can emerge from there. The process may happen in a real physical space or in virtual computer generated 3D environments (Frank, H.-J. 2007).

CONCLUSION

Over more than 25 years we have realized the strategies of artists, inventors and filmmakers to develop novel solutions in industry, politics and society in Europe, USA, Canada, South America, Africa, Asia etc. for clients like companies, public organizations, international institutions, NGOs, governments and civil society. For more than 10 years we worked with students at several universities and art colleges in workshops around “artistic prototyping,” “visual problem solving,” “virtual knowledge spaces,” “aesthetic creation of business processes” and “artistic co-creation in organizations.” Now we are ready to encourage the application of our experience on a higher level of problem solving in the perspective of global and local challenges and overlapping crises in our modern world. The “Dialogarchitecture for a Sustainable Future” is a first step and offers a space to incorporate different problem solving activities and to enable actors to enjoy working in a view of a the world as one whole system we are all part of. We invite actors to put their projects and co-creation processes into this environment. Our expectation is not to “change the world” but to enable us and people around us to implement more and more solutions with a quality of collective responsibility. These solutions may seem small. The radius of our possibilities may seem little and restricted. But it is not about big solutions but about our effort to do our best. This is our everyday responsibility towards our grandchildren.

REFERENCES

Drosdol, J. & Frank H.-J. (2005 a). Information and knowledge visualization in development and use of a management information system (MIS) for DaimlerChrysler. In S.-O. Tergan & T. Keller (Eds.), *Knowledge and information visualization: Searching for synergies*: 364–384. Heidelberg: Springer.

FOCUS. www.focus.de. 22.01.2016, 08:58: https://www.focus.de/kultur/kunst/kunst-joseph-beuys-und-die-soziale-plastik_id_5229671.html

Frank, H.-J. (2007). “Virtual real communities” and cooperative visualisation. In Y. Luo (Ed.), *Cooperative design, visualization, and engineering: 4th International Conference, CDVE 2007, Shanghai, China, September 2007, Proceedings*. LNCS 4674: 250–256. Heidelberg: Springer.

Frank, H.-J. (2014 a). Von der visualisierten Moderation zum kuenstlerischen Co-Creations-Prozess. In J. Freimuth & T. Barth (Eds.), *Handbuch Moderation in der Reihe Innovatives Management*: 171-194. Göttingen: Hogrefe.

Frank, H.-J. & Lehnemann, M. (2014 b). Strategische Entscheidungsraeume – Wie Moderation Schluesselprozesse der Unternehmensfuehrung transformiert. In J. Freimuth & T. Barth (Eds.), *Handbuch Moderation in der Reihe Innovatives Management*: 269-292. Goettingen: Hogrefe.

Frank, H.-J., Maak, T. & Pless, N.M. (2021 a). “Digital Responsible Leadership” – Dialogische Fuehrungsverantwortung im Zeitalter der Digitalisierung. In Luppold, S., Wolfgang Himmel, W., Frank, H.-J. (Ed.), *Beruehrende Online-Veranstaltungen*. Wiesbaden: Springer Gabler

Frank, H.-J. (2021 b). KunstPROZESSE in Wirtschaft und Gesellschaft fuer die Loesungsfundung in aktuellen Herausforderungen. In Luppold, S., Wolfgang Himmel, W., Frank, H.-J. (Ed.), *Beruehrende Online-Veranstaltungen*. Wiesbaden: Springer Gabler

Lotter, W. (2020). *Zusammenhaenge*. Bellheim: Koerber

Lüpke, G. v. (2009). *Zukunft entsteht aus Krise*. Muenchen: Riemann, 9-17

Pless, N.M., Maak, T. & Frank, H.-J. (2022). *Dialogarchitecture: An artistic co-creation process to enable responsible leadership learning and implementation*. In: Maak, T. & Pless, N.M. (Eds.), *Responsible Leadership*, 2nd rev. and extended edition, London/New York: Routledge.

CONTRIBUTORS

ADESIDA, Teju. Chicago Arts Partnerships in Education (CAPE)

AMADOR VALDEZ, Josué. Artist.

BOMERS, Irmgard. Artist.

BONNEVAL, Karine. Artist

BOURNINE, Hacem. Président, Association les Mots Zélés.

BRANDELLERO, Amanda. Dr. Erasmus University Rotterdam

BROCHOT, Nadia. Directrice, GEME (Groupement des Entreprises de Moselle Est).

BUIZER, Marleen. de Carvalho, Taina. Art Therapist.

Painovoima association, Lahti, Finland.

DIAELLO, Vittoria. PhD, College of Design, Architecture, Art, & Planning, University of Cincinnati.

DIAZ, Mark. Chicago Arts Partnerships in Education (CAPE)

DJJKHUIZEN, Emma.

DUNYACH, Jean-Claude. Writer.

FRANK, Hans-Juergen. Dialogarchitect.

FRED, Robert. Writer, poet.

HABBRAN, Yves. Dr, ICN Business School, CEREFIGE-Université de Lorraine.

HAHN, Ulrike.

JACKSON, V. PhD, School of Business and Economics, Freie Universität Berlin

KLINGENBERGA, Ieva. Artist.

KNOCHEL, Aaron. Dr., College of Arts & Architecture, PennState University.

KUEPERS, Wendelin. Prof. Dr. Karlsruhochschule International University.

KURAPKAITYTE, Kristina. Content Strategist at Vinted Go, Vilnius, Lituanie.

LAQUET, Christine. Artist.

LICARDI, Steven, T. Poet.

LOOTS, Ellen. Dr., Erasmus University Rotterdam.

MAIRESSE, Philippe, Dr., PhD, ICN Business School, CEREFIGE-Université de Lorraine.

MARTINEAU, Régis. Dr, ICN Business School, CEREFIGE-Université de Lorraine.

Mc GREEVY, Steve. PhD, University of Twente, Netherlands.

ORDENER, Steve, ICN Business School.

PERSSON, Sybille. Dr., HDR, CEREFIGE-Université de Lorraine.

RELANO, Francesc, Dr. ICN Business School, CEREFIGE-Université de Lorraine.

SCHAAP ENTERMAN, Jet

SCHUELER, Judith. Director Accez, Zuid-Holland

SHRIVASTAVA, Paul. Dr., Prof. PennState University.

SIKKEMA, Scott. Education Director, Chicago Arts Partnerships in Education (CAPE)

SPIEGELBERG, Maximilian. PhD, Co-Director at FEAST.

STEWART, Ketty. Science-Fiction writer.

TAMS, Svenja. PhD, Berlin School of Popular Arts, SRH Berlin University of Applied Sciences.

TATE, Jordan. College of Design, Architecture, Art, & Planning, University of Cincinnati.

TREMBLAY, Genevieve. Executive Director at ASKXXI: Arts + Science Knowledge Building in the XXI Century.

VAN DEN BRINK, Evelien.

WILMOTT, Chris. Artist.

ZACHARIOU, Renée. Writer.

DYSFUNCTION #8-9

is published and designed by antoine lefebvre editions in an edition of 1000 printed copies completed by an online version. It displays the Augmented Proceedings of the Trans-Generatives 2030 conference *Impactful Actions for a Sustainable Future through Art & Science* (March 14th to April 2nd, 2022), a four-week action-research conference, online and onsite at Station A, ICN Business School Campus, Nancy, France, related to the ARTEM OCC conference.

Trans-Generatives 2030 is a network of sustainable practices, research and education across a diversity of regions, countries, communities and cultures, focused on introducing imaginary, symbolic and aesthetic dimensions into functional rationalities, in order to feed and influence decision-making processes towards sustainability transformations. <http://transgeneratives2030.eu/>

The event was organized by the ICN UNESCO Chair “Art and Science for Implementing the Sustainable Development Goals” and the CEREFIGE-Université de Lorraine, with the financial support of Région Grand-Est.

Concept and organization: Philippe Mairesse, responsible of ICN UNESCO Chair. Paul Shrivastava, head and founder of ICN UNESCO chair.

Organizing team: Estelle Durand (Head of Promotion and Support Research Service at ICN), Marie-Emmanuelle Amara.

Proceedings editing: Philippe Mairesse, Sajida Muhammad Tayyeb (PhD student).

Thanks to Wolfram Berger, former Academic and Research Director at ICN Business School.

DYSFUNCTION is published under the Creative Commons BY-NC-SA license.

The title is set in StatementFD created by Adrien Vasquez, frank-David and Philippe Mairesse, and produced by Accès Local/Local Access, the text is set in Brill. ISSN (on line): 2650-7854

DYSFUNCTION is available for free while stocks last from www.dysfunction-journal.net

DYSFUNCTION is a free artistic and academic journal created



unesco
Chair Art and Science for Implementing Sustainable Development Goals



ICN CREACTIVE BUSINESS SCHOOL
PARIS • NANCY • BERLIN

Ecologies of Transdisciplinary Research

Paul Shrivastava, Laszlo Zsolnai, David Wasieleski & Philippe Mairesse

Summary

We are scholars of economics, business, and sustainability. For the past two decades we have been doing transdisciplinary work individually and jointly. Our individual and sometimes joint journeys come together in the TransGeneratives 2030 event that serves to launch the UNESCO Chair on Integrating the Arts and Science for Implementing Sustainable Development Goals at the ICN Business School, in Nancy, France. In this essay we share some key lessons that we have learned about the ecologies of transdisciplinary work.

We consider transdisciplinarity to be qualitatively different from interdisciplinarity or multidisciplinary in several crucial ways. Transdisciplinary work takes its problems from the real world and not disciplinary gaps in knowledge or combining disciplines for innovative new understandings. Transdisciplinarity involves co-creation of integrated knowledge across disciplines with stakeholders to solve problems on the ground. It represents knowledge in action (Morin, 1990, 1992; Nicolescu, 2002). There is a need to bridge the arts with the sciences to fully address the social and environmental crises facing the planet. Transdisciplinarity can meet this need if certain barriers are overcome: namely, delimited thinking and dysfunctional institutional structures.

We wrote a commentary about it for *Groundworks* (See p. 8): Read full text at <https://groundworks.io/journal/commentaries/9>



by Natalia Bobadilla, Antoine Lefebvre and Philippe Mairesse.

DYSFUNCTION publishes research that trespasses the boundaries between arts & social sciences.

DYSFUNCTION is hybrid, both an artist publication and a research object. Each issue highlights practices that combine art and research in social sciences and humanities, and disseminates research findings through artistic forms.

DYSFUNCTION is financed by research and academic institutions but decisions about the publication are made by the editorial team only.

DYSFUNCTION offers a permanent open call. If you think your work can interest us, write us. contact@dysfunction-journal.net



La Région **Grand Est**