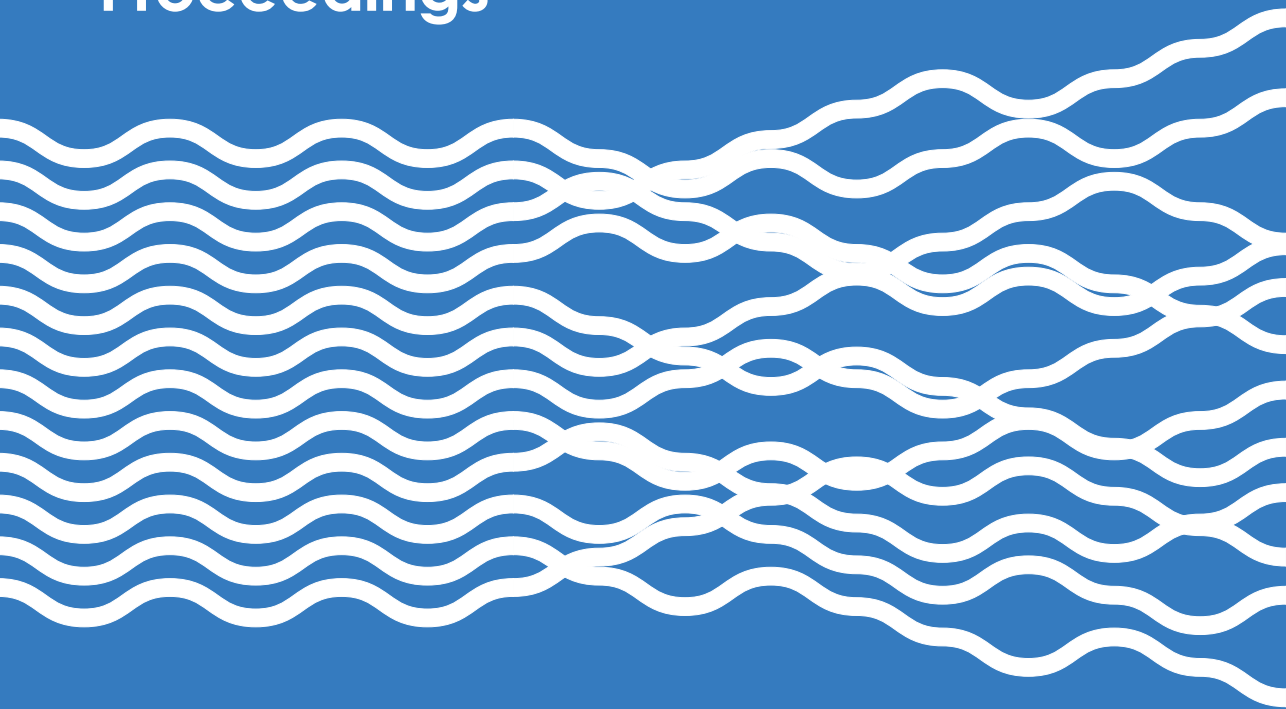# Conference Proceedings

Sharing Society

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Sharing Society

**The Impact of Collaborative Collective Actions
in the Transformation of Contemporary Societies**

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Editors

Crosscutting Artistic Creations between Technology, Natural, and Social Sciences. Eco-Ethical Stakes and Challenges[1]

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Abstract: *On many aspects of our post-Duchampian information societies, a transition from a culture of object to a culture of flux and interaction takes place. Or wouldn't we be in an in-between? Facing up to ecological and technological concerns entailed by mass production and consumption, and more recently by the growing presence of screens, algorithms and robots, not only do we apprehend differently the act of sharing and the idea of common good, but we also are pushed into reconsidering other related fundamental concepts and critical ways of living and being; in other words, our place, actions and impacts in the world. Which values and representations hypermodern societies assign to the idea of intelligence and humanness for instance? Which ethical and esthetic relations is it possible to maintain with life? What kind of thoughts and actions are allowed within the paradigmatic, sociocultural, and technoscientific frameworks in which we live? Since its emergence, what we call art has never ceased to participate in the experience of life in enriching our links to the world. In view of the transformation(s) of our contemporary societies, artistic creation appears to be a singular prism. Our proposal on the impact of collective actions in societal changes focuses on a selection of collaborative art at the intersection of technology and philosophy, natural and social sciences. The projects in question are: The Machine to Be Another by the collective Beanotherlab, the interactive Generative Visual Renku project by Fox Harrell and Kenny Chow, and EDEN by the artist Olga Kisseleva in collaboration with INRA and Orange Art Factory. Addressing the "acting and interactive subject", we will see to what extent these crosscutting artistic forms and dialogues accompany certain societal transformations in shedding light on the notions of humanness and otherness, but also on semi-visible representations and forces that are necessary to question. Therefore, how collaborative art can offer vital sidesteps and critical thinking spaces to create just as necessary horizons of meaning and actions. Finally, this paper aims to question the kind of meaning and actions it is possible to develop; in other words, the considerable eco-ethical challenges hold within our fast-changing societies.*

Keywords: *Art+technology creations, networks, sensitive interactions, ethics*

1. Introduction

On many aspects of our information societies, a transition from a culture of object to a culture of flux and interaction takes place. Or wouldn't we be in an in-between? Facing up to ecological and technological concerns entailed by mass production and consumption, and more recently by the growing presence of screens, algorithms and robots, not only do we

apprehend differently the act of sharing and the idea of common good, but we also are pushed into reconsidering other related fundamental concepts and critical ways of living and being; in other words, our place, actions and impacts in the world. Which values and representations hypermodern societies assign to the idea of intelligence and humanness? Which ethical and esthetic relations is it possible to maintain with life in a time when the dominant paradigms refer to principles of identity and identification? In such a context, more than ever, the arts need the social sciences to produce critical alternatives and "lines of flight".

In French documentary "Will artificial intelligence overtake us?" (L'intelligence artificielle va t'elle nous dépasser?) (Depardieu and Martin 2018), to the question of what will remain to humans with the expansion of artificial intelligence, Yann Le Cun, Chief Artificial Intelligence Scientist at Facebook AI Research, answered that, as "robots will manufacture everything that is material, (they) will allow us to concentrate on the really important things in general, it means human-to-human interactions, communication of emotions, art, art is the communication of emotions." (Documentary 2018).

Corollary to this presence of technologies, contemporary societies are marked by a kind of global however fragile and complex awareness. Human species, composed of individualities constituting a variety of communities, currently lives and inhabits, alongside a breadth of other living species, in fragile, limited and endangered ecosystems. Full of paradoxes and ethical tensions, we nonetheless tend to realize that coexistence and collective intelligence are among the most important keys to face these serious and fundamental issues. These concerns are linked to "the really important things" mentioned by Le Cun. Presuming that robots could manufacture everything the fact remains that there still is a long way to go to better understand "these important things" whereas ecological crises are already here. Human-to-human interactions, human-to-other species, and human-to-machine interactions are complex interdependences where biological, representational, cognitive, socio-cultural, technical and environmental aspects are intimately linked. And such combinations are precisely not without ethical consequences.

In this regard, Japanese philosopher Tomonobu Imamichi is careful to decipher a world which is increasingly defined by what he terms "technological cohesion" and which, by creating logics of interaction, enables a greater awareness of what links us to each other. This technological cohesion is however ambivalent (Imamichi 1984:4), because what links us virtually is also what tends to lead to our fall in moral terms. The virtual link can in fact give rise to a singularly strong dissolution of our sense of responsibilities. Because of the vast increase in the number of mediations, we are no longer in a position to clearly observe the consequences of our actions. Technological mediations lead to the building up of an invisibility which turns out to be detrimental to our awareness of the impact of our actions on others; they are thus likely to lead to a dissolution of the sense of morality because of the distance they tend to generate between oneself and others (Chardel 2013:18).

But what does it mean to be in the world and have an impact on it? Being in the world means allowing the other to be beyond oneself, and respecting the differences which irrevocably separate individuals, while recognising the importance of remaining anchored in the sphere of being. From this viewpoint, extension outside oneself is not a denial of the density of being oneself. On the contrary, it presupposes a certain degree of perseverance in being, which is the

true prerequisite for the possibility of opening ourselves up to others.

At this level, the concept of meditation plays a central role. Meditation is what prepares someone for the moment of action, the moment when you move towards the other. And it is important to be attentive at this prior moment, and to the "place" where the act is to be deployed. The reference to "place" is there to remind us that it is in the immanence of the world that the other reveals himself to us. It also refers to the possibility of sharing a "felt" and symbolic experience. It is thus by incorporating a reflection on the countless technological upheavals, which affect our mode of coexistence that we should now think about our relationship with the world. Wanting to live together is not just an ideal. It refers to material conditions, to mediations, and to primordial forms of technicity. If a community brings together people who share a certain territory, the sharing of common representations – which gives rise to a collective subjectivity, a mentality, an imaginative dimension – cannot be conceived independently of the material configurations assumed at each period by space and duration: "The practical regulation of our coexistences depends on technical modes of appropriating our environment" (Debray 2002:100). But our technological environments are not without creating very specific forms of withdrawal, of information bubbles. More than ever, art practices can intervene for more reflexive ways of interacting with technological innovations.

With its abilities to use the intellect, imagination, intuition and feelings; involving the body and the other, and more or less directly an environment; interacting more freely with other fields of knowledge, art is a singular prism. Since its apparition, at least from the traces we have, art has never ceased to participate in the experience of life, accompanying the consciousnesses, techniques and productions of societies; and this even though art is a concept that needs to be contextualized to be understood. However, and although collaborative actions are not a new practice in the arts, we will see through a selection of crosscutting art projects how they seem to bring useful inputs in approaching three ethical tensions at stake within our contemporary societies. In what sense are these tensions significant? What are their impacts on the understanding we can have of the present time?

2. Process vs. Identity. Being Present & Identification

Art History professor Grant H. Kester described a shift from a concept of art as something envisioned beforehand by the artist and placed before the viewer, to the concept of art as a process of reciprocal creative labour (2011:7). Wouldn't it also be the labour of consciousness, a process of awareness?

Among the issues that accompany the transformation of contemporary societies, one of the questions that underlies our paper is the meaning and the fact of being human. It is now the question of our humanization. According to paleoanthropologist Anne Dambricourt-Malassé, humanization is the combination of three elements: first, our verticality, which is also the verticality of the central nervous system; second, the idea of an ongoing process (organized, self-organized process that becomes more and more complex; process that, since, has never stopped); and the third feature is our consciousness. As the paleoanthropologist explained:

"Contrary to hominization that is determined, as embryonic origin of verticality shows, humanization is what is not genetically encoded. Humanization is what is not acquired, not determined. Humanization is fragile. It is the ethical relation and connection with life, which is impossible without understanding the environment and our links with it. (…) There is a deep affiliation with the history of the universe. This mechanism of evolution is within us". (Talk at the Egdar Morin Chair on complexity [Chaire Edgar Morin de la complexité] 2017).

From this perspective, it is interesting to see to what extent being human resonates and how deep the idea of an ethical relation may be connected with what constitutes the world in which we live. Seeing and being aware of the living and the various environments in their richness and complexity is related to our thinking skills, and maybe more importantly our critical thinking. It is also our capabilities of perception, and the possibilities to have feeling, curiosity and intentionality. Thus, being able to build an ethical relation to life and the other largely depends on what Colombian-American anthropologist Arturo Escobar calls our "thinking-feeling process". This enables us and implies to (take) care about (of) the other, which is also the other per se.

'The Machine to Be Another' is an artistic collective project addressing the perception and comprehension of the Self based on the understanding of the Other with the aim to approach the relation between identity and empathy. Designed by Beanotherlab, interdisciplinary group of artists, researchers and activists, "the project merges performances with protocols of neuroscience experiments, in order to offer users an immersive experience of seeing themselves in the body of another person." (Bertrand et al. 2013). Supported by the Media lab Hangar and the Universitat Pompeu Fabra in Barcelona, the low-budget virtual reality system was tested in a series of experiments with local communities in Spain. Combining elements of telepresence and performance, the system generated the psychophysical experience of being present in the body of another.

"The users movements were coupled to those of the performer through head-mounted displays, head tracking, headphones, microphone and servo controlled cameras. The performer followed user's movements in an identical space." (Bertrand et al. 2013). Thus, they were able to interact with objects, their own body, as well as the internal narrative of the performer's thoughts and memories that were recorded. The team worked on mother-daughter relationships, on body extension, gender swap and empathy towards an immigrant. In this latter, as explained on the collective's website, users could see themselves in the body of Youssoupha, an immigrant from Senegal living in Spain. Youssoupha shared stories about his childhood, his love for dancing, and his immigration, according to the interaction of users with objects in the room. Such a dialectic is obviously opposed to the policies of inhospitality and suspicion that prevail today, by introducing particularly violent logics of separation and exclusion, of scrapping.

Figure 1. Youssoupha Letting the User See Himself through his Point of View
Note: This figure was taken from the paper published by the collective about the system
'The Machine to Be Another'

From all experiments, the group collected the statements from users that shared their newfound awareness and interest towards "the other". According to its designers, this hybrid and flexible approach "could be used in a wide variety of (social) embodied applications for performing arts, systemic psychotherapy, neuro-rehabilitation, and empathy research." (Bertrand et al. 2013).

Technology appears to be in such cases a powerful social tool. However, face-to-face contact, as we find in Emmanuel Levinas' thesis, is in a way irreplaceable in the experience we can have of others. While Levinas has not specifically written about new technologies, his lines of thought can alert us in a very useful way. He suggests for example that we should consider that the appearance of the face of the other marks the beginning of ethics. It is thus not just a face I see on a screen, but a face which comes to take hold of, and destabilise, my consciousness by constituting itself as such. By addressing the other directly, I expose myself to the risk that is inherent in all real interlocutions. "It is essentially through words spoken face-to-face that the ethical relationship is established, and that the Other destabilises the clear conscience that the self coincides with itself." (Levinas 1994:118).

Implicitly, Levinas warns us against the latent risk of losing faces or a certain degree of proximity, which is considered to be necessary for the development of a genuine awareness of others. With such analyses in mind, experiments as developed by Beanotherlab appear to be all the more necessary, especially as, additionally, they question us on how well we know ourselves, what do we know about the other, the "stranger", a friend, our family members; to which extent are we able to feel empathy through but also without technological systems. How do we create and maintain links?

With regard to technological systems, the incorporation of an aesthetic dimension in the relationship we have with technologies not only guarantees singular and heterogeneous uses, enabling the production of variations, but also reinforces the idea that technology does not systematically establish a relationship of provocation with regard to nature and human. Technologies refer to complex interactions that do not simply engage instrumental rationality, but invite us to be sensitive to what escapes us with the naked eye.

3. The Visible and the Non-visible

The potential and virtual displacing of the "I" is one of the actions towards an ethical relation to life that could accompany the transformations of contemporary societies. Which meaning do we give to the other, to living beings and non-living agents? How technological systems reduce, control and fix their objects and subjects? How do they make us reduce the other? How data and information are used and interpreted?

These questions include two sides, two responsibilities: on one hand the purposes of the decision-makers, programmers and designers, whatever they may be; on the other hand, the appropriations of the user, the viewer, regardless the application is. In the perspective of sharing societies, the game of exhibition and concealment has taken another dimension; and this at the exact heart of the technological systems. Whether this is "by nature" or done on purpose, some things are shown, others hidden; some of them are visible while others are simply non-visible.

In their own ways, the two following projects deal with this tension. Connected to data of the Internet, algorithms relate how and on which topic people may interact to each other the most. This was one of the objectives of the collaborative project Stalagmemes. Displayed at Palais de Tokyo in Paris in 2017 for the exhibition *The Dream of Forms* (*Le Rêve des Formes*), Stalagmemes was conceived by the artists Jonathan Pêpe and Thibaut Rostagnat and mathematician David Chavalarias. The interactive platform attempted to make traces of what is called "collective intelligence on the Internet" perceptible: "Our digital societies leave multiple traces on the web and social networks, which accumulation is the support of a collective intelligence." (Lecture Chavalarias 2017). Resembling stalagmites, the forms of Stalagmemes came from the data analysis of Climate Tweetoscope at the time of the Conference Of the Parties 21 (COP21). Developed by Chavalarias at the Institute of Complex Systems of Paris, Climate Tweetoscope collects and represents data that are exchanged on the web about climate change. Technically, the authors developed connectors and processing chains to adapt Tweetoscope's data to the installation using techniques from video game industry to transpose these collective phenomena into a poetic space. Through this interpretation, we are also reminded that all productions are biases, even aesthetic and formal appropriations. Just as the question of identity, it is always a matter of what is shown or visible and what is not, deliberately or not. Technologies are as powerful tools of visualization as they are ambivalent with regard to both the data that are used and shared, as much as their interpretations.

Because seeing and knowing facts don't seem to be enough. In the case of the ecological crisis, we clearly see that knowing facts doesn't stop us from destroying ecosystems balances. Manifestly, economical and political motives are at stake. However, as the doctor in neurosciences Sébastien Bohler reminds us in his book *The Human bug* (Le Bug Humain) (2019), short-term visions, contradictory behaviors and inactions may also find explanation with biology, more specifically with the striatum and the circuit of reward. As a component of the reward system, the striatum releases dopamine and is at the service of satisfaction. It is mainly the satisfaction of fundamental behaviors among which eating, reproduction and parental investment, and with time social status and accumulation of assets. These primary rewards are also driven by "the policy" of the least possible effort. Nonetheless, as highlighted by the neuroscientist "what is interesting is that we can reprogram the striatum and seek different satisfactions. One of

the ways of doing so is through consciousness; in being conscious of what we think and what we do". (Interview Bohler radio show February 2019). Being conscious is at the heart of the visible and non-visible tensions. It enables us to make visible the representations driving our meaning-making processes that will then lead to different behaviors.

In his book *Phantasmal Media*, professor of Digital Media and AI at MIT Fox Harrell tackles those non-visible and semi-visible representations he calls phantasms. Blends of cultural ideas and sensory imagination, these phantasms are at the root of our meaning making processes, influencing almost all our everyday experiences. The author attempts to question responsibilities of both programmers and users in making more visible and explicit the diverse ways of representing and manipulating content, and relationships between humans and computing systems. Playing a considerable role in our sharing societies, computers and algorithms have values and meanings built into their structures. "Technologies are produced in historical-cultural contexts (…). They play powerful roles in establishing, maintaining and transforming social structures as well as empowering and/or weakening individuals, groups and behaviors." (Harrell 2013:345). Stories are told through them.

An example of this work is the Generative Visual Renku project that emerged from the collaboration between AI professor and Kenny Chow from School of Design Hong-Kong University. The Generative Visual Renku was a generative multimedia poetry project "informed by the research into the interplay between visual characteristics (iconity) and underlying meanings (conceptual metaphor) by Masako Hiraga." (Harrell 2013:61). From these elements, the research workers designed Coding Landscapes, Crossing Metaphors, a platform into which a human character, composed by the system, transforms to adapt to the terrain over which it walks:

"The animated people are placed into a fanciful topography articulating the nuanced interplay between organic (natural or hand-created) and modular (mass produced or consumerist) artefacts that saturate our lives. (…) The animated people traverse the resultant topography and accumulate possessions based on the spaces they have journeyed through. The landscapes and character transformations (…) illustrate how visual meaning can also be subjectively represented in a manner that takes advantage of an underlying analogy-finding algorithm that structures meaning dynamically". (Harrell 2013:60)
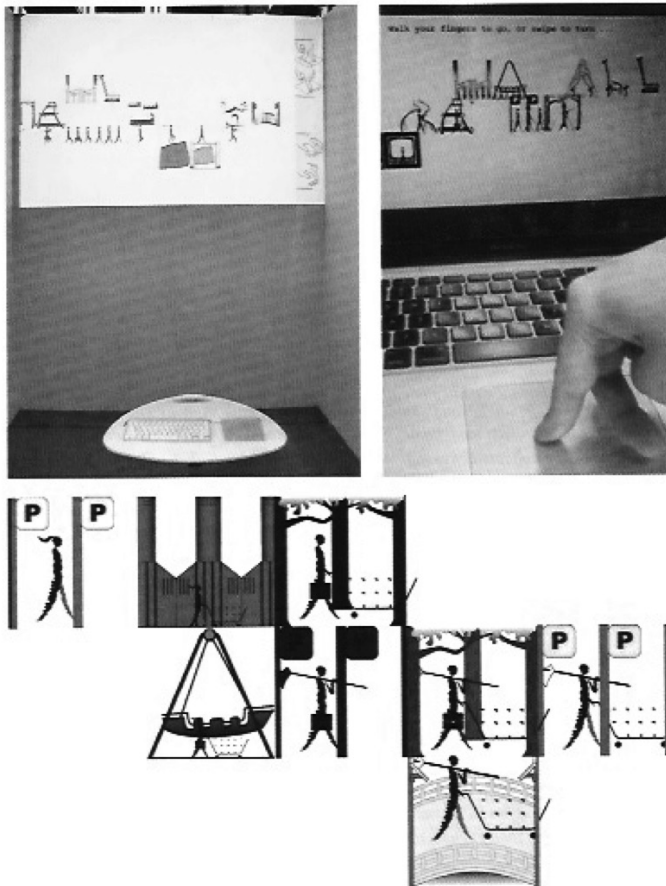
Figure 2. Coding Landscapes, Crossing Metaphors (Left); Walking One's Fingers along a Touch Pad Results (Middle); Character Walking across a Generated Landscape (Right)
Note: This figure was taken from the book of D. Fox Harrell titled Phantasmal Media
(2013:61) – section Imagining and Computing Phantasms

When developers build systems and users interact with them, all bring their own experiences and backgrounds. As reminded by Harrell in proposing a humanistic and interpretative framework, experience is at the root of human meaning making, also in computational media. Making socio-cultural representations conscious, deciphering meaning production, occurs in an ecology involving a variety of agents and cognitive phenomena.

And what we perceive through these collective artistic projects is the extent to which this complex ecology may be reassessed, at all levels. Establishing vital critical spaces and links, it is specifically in a "zone of questioning and indetermination", in reference to philosopher Henri Bergson, that the creative work can be developed, individually and collectively; and whose "expressive goals are of a different nature than usability or productivity-oriented goals." (Harrell 2013:56).

4. The Speakable and the Ineffable

Underpinned by important aspects; from the reassertion of the belief and value systems, to the meaning-making network, by way of the elasticity of meaning, discursive narration and vocabulary, this tension between visible and non-visible elements leads us to the third related resistance: what about "things" that cannot be expressed with words?

During a French radio show broadcasted on August 2018, Francis Hallé, biologist and specialist in tree architecture, explained how, in amazon rainforest, trees suffering from heat can call for rain. Trees emit a molecule that once in the air engenders the formation of storm and rain, specifying that this capacity may be generalized to other regions. Acknowledging that the essential remained to be discovered about the vegetal world, the biologist pointed out the limits of our linguistic system to truly describe it. To the question of knowing if plants were intelligent, he clarified that the word intelligence wasn't appropriated to qualify this green world. To him, the notion of intelligence, as we used it, would only reduce the abilities the plant world has developed to survive but also "to provide for" all the living beings depending on it, and of which we are part. May this help us to perceive to which extend our knowledge, as important as they are, remain limited on some aspects of life, especially maybe on the perception of the connection between non-visible and ineffable phenomena?

In collaboration with National Institute of Agricultural Research (INRA, Institut national de la recherche agronomique), Art&Science Sorbonne Institute and Orange Art Factory, media artist and associate professor Olga Kisseleva developed EDEN (Ethical Durable Ecology Nature). EDEN focuses on a new kind of organic network based on vegetal. With the aim to contribute to landscape protection, the project has been made possible by collaborating with scientists and the help of digital technology. The different devices built within this framework have enabled communication between different trees, and between trees and human. Among various installations such as with drunken forest in Northern Europe, Pines and Elms in Japan, the artist has also established communication with Kauri, endangered species in New-Zealand.
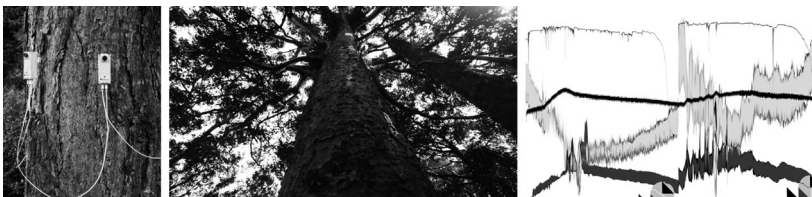

Figure 3. Olga Kisseleva. Installation Functioning Scheme and Sensor for EDEN (Left); Transcription of the Liquid Circulation Dynamics in the Trunk of the Tree (Right); Kauri, Waikato, New Zealand, 2018
Note: This figure was taken from the documentation of the artist presenting EDEN project

Technically, with the analysis of the data from the trees and through the installation, the team was able to connect the biorhythm of the plant with its surrounding world in using plants' expressive language: infrasound and vibration. The artist explains:

> "*This network helped trees to optimize their vital mechanisms and to protect themselves from potentials aggressors, and especially from the kauri dieback. (…) Through the*

contact with human body, the chosen tree acquires an organic sound identity in a form resembling a heartbeat. Interacting with the installation becomes a meditative moment, both collective and intimate, symbolically reflecting the viewer's own body." (Kisseleva 2017 unpublished document).

Figure 4. Olga Kisseleva. EDEN, 2018
Note: This figure was taken from the documentation of the artist presenting EDEN project

From scientific and artistic perspectives, and in a more interesting and sensitive way when shared, these collaborations show us that even though some communication are non visible and non speakable, they can be explored and established. This is another kind of listening, an art of listening differently. Referring to Michel Serres' work, it appears that we need different kind of dialogues and translations; a translation that consists in linking elements that are a priori immeasurable and incommensurable.

5. Conclusion

In the context of hypermodernity, we can say that with a lot of artistic experiments, we are more intensely encouraged to spurn the fascination which usually surrounds technical objects in the consumer society, by reinscribing them in a complex symbolic universe, made up of differences and shifts. It is probably in this way that new technologies become something through which we learn to see and interpret the world differently. Creations, which are associated with new technologies, act like processes through which singularities can be reasserted in a way that goes beyond the varied logics of standardisation conveyed by the mass media, advertising and marketing. They make possible to maintain the autonomy necessary to the critical amazement in a world in which technological innovation – with the risks it may generate from an ethical and ontological viewpoint – cannot reasonably be accepted as such.

As beings with feelings, people must continue to keep their moral awareness alert, despite the emergence of technological mediations that tend to neutralise the confrontation within which all veritable and authentic interactions with others must remain. This Eco-ethical perspective

suggests to us that the development of responsibility to future generations begins by continuing to pay attention to the quality of the relationships we establish with our contemporaries. There can be no "remote" ethics, that is moral responsibility assumed in relation to future generations, without an aesthetic of coexistence (Chardel 2013:23). It is by cultivating a certain degree of harmony in our relationships with others, and in the very perception we have of the many symbolic forms which nourish these relationships, that we can collectively deal with the problems that the hypermodern society will force us to resolve, by requiring us to make a commitment just as much with our understanding and our imagination as with our sensibility. It is through such arrangements that sharing areas can emerge and offer in our fast changing world some sources of consolation and meaning.

Looking towards the horizon of future democracy, it will be necessary to intensify heterogeneous reception modes of audio-visual media in order to provide citizens with ways of learning how to interpret the multitude of media flows. We will have to learn how to dissociate the technical time of instantaneity from the time of subjectivities, in order to reorganise our collective existence by taking into account ecological issues related to citizens' psychological and mental balance, and their ability to preserve a certain degree of autonomy of judgment. The short time frames of the networks must therefore be counterbalanced by time frames in which we strive to embrace the fate of subjectivities in the complexity of the situations in which they exist, but also the long time frame of our historical consciousnesses. In this respect, the experience of art refers us to a perception of time that is not that of hyper-connexion and instantaneity. This is one of the reasons why it is an incomparable experience both ecologically and ethically.

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7. Methodological Appendix

This joint research began in 2016 following a discussion at EHESS with artist Olga Kisseleva. Marked by several stages, our project was nourished, among others, by the artist's seminar at Sorbonne on "Interdisciplinary projects: art and science", and has, as methodological background, the interdisciplinary seminar "Subjectivity, corporeality and connected objects" organized collaboratively between the IMT, Lasco IdeaLab and ESAD.

8. Abbreviations

• **EDEN:** Ethical Durable Ecology Nature.
• **INRA:** National Institute of Agricultural Research (Institut National de la Recherche Agronomique).

9. Bibliographical Notes

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10. Notes

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