BALANCE–UNBALANCE: TRANSFORMING PARADIGMS (ART ↔ ENVIRONMENT)

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Abstract

The equilibrium between a healthy environment, the energy our society needs to maintain or improve this lifestyle, and the world's interconnected economies, could pass more quickly than expected from the current complex balance to an entirely new reality where human beings would need to be more creative than ever before to survive. The frequency and severity that certain weather and climate-related events are having around us is increasing, and the ability of human beings to modify our adjacent surroundings has turned into a power capable of altering the planet. Do the media arts have a role in all this?

We are living in a world reaching a critical point, where the equilibrium between a healthy environment, the energy our society needs to maintain or improve this lifestyle, and the world's interconnected economies, could pass more quickly than expected from the current complex balance to a completely new reality, where unbalance would be the rule and human beings would need to be as creative as never before to survive.

Traditional disaster management approaches are not enough to deal with the rising risks, and new forms of collaboration are needed to inspire people and organizations to link knowledge with action. Do [media] artists have a responsibility in this context? Have the media arts a role in all this?

Artists could inspire new explorations regarding how to actively participate in helping to solve this major environmental challenge. We need to develop innovative ways to facilitate a paradigm shift toward a sustainable future. We need to think about the future—from a diversity of cultural perspectives and socioeconomic situations—with open minds. Creative thinking, innovative tools, and transdisciplinary actions could help to produce perceptual, intellectual and pragmatic changes. It is not about an indulgent utopia for the future, nor about a desire. It is a matter of survival.

Three initiatives were launched that aim to use media art as a catalyst, with the intent of engendering a deeper awareness and creating lasting intellectual working partnerships to help solve our environmental crisis. All have been well received by an international community of media artists and by humanitarian and cultural organizations, policy makers, educators and experts from a variety of fields. Those initiatives are: The *Balance-Unbalance* program, the "*art!* ⋈ climate" contest, and the online EChO network.

Balance-Unbalance

The arts could play a major part in helping global society to understand the magnitude of the crisis we are facing and in promoting awareness around environmental matters. And they could also be a very good vehicle to disseminate proposals that could produce changes in society's behavior and decisions, influencing our chances for the future. Artists could promote inter- and transdisciplinary actions focusing on the global environmental crisis and our responsibility regarding the turning point we are living in, defining the future of humans on Earth.

The *Balance-Unbalance* project (BunB) was launched with an international conference in 2010, whose goal is to develop the roles of media arts and artists in dealing with environmental challenges. *Balance-Unbalance* explores [art, science, technology…] intersections between nature and society, as we move into an era of unprecedented ecological threats.

The first conference was held in Buenos Aires, Argentina, in 2010, and was hosted by the National University of Tres de Febrero. Papers were delivered by a representative of the National Secretary of Environment and Sustainable Development of Argentina, experts and graduate students from different universities with chemical, agricultural, and environmental engineering backgrounds (some of them specialists in pollution, renewable energies and food technologies), a lawyer, a sociologist and philosopher, an astrophysicist, and artists from Argentina, Brazil and Canada [1].

Balance-Unbalance was held again in 2011, this time at Concordia University in the city of Montreal, Canada. Those were two days of reflection, debate, information exchange and the promotion of projects and actions regarding the environment and our responsibilities under the current circumstances. This conference was possible thanks to the direct involvement of faculty from very diverse backgrounds, like Communications, Political Sciences, Geography, Management, Music, Design, and Computation Arts. There was an amazing number of submissions received to participate in the conference, with paper presentations, posters, films, electroacoustic and computer music, art installations and also a diversity of transdisciplinary sessions with open structures to accommodate all kinds of innovative proposals, always considering media art as the interconnecting hub and the environmental crisis as the umbrella covering us all [2].

In 2013, a third edition of *Balance-Unbalance* once again showed the potential of these actions. The expected catalyzer started to work better each time, and the media arts were, step-by-step, helping to lead the way in connecting some dots. This time the conference was held at the Noosa Biosphere, an ecological reserve in Australia recognized by UNESCO. This biosphere is a dynamic learning laboratory for sustainability in one of the most pristine and diverse environments in Australia. It covers the region of Noosa, in the state of Queensland. The three-day conference was hosted by the Central Queensland University, with satellite events in several other places, including Lake Cootharaba. An e-book with some of the papers presented at that conference was published, which can be downloaded from the Internet for free [3]. The conference theme: "Future Nature, Future Culture[s]" aimed to challenge our expectations of Earth, provoke our understanding of nature and inspire our actions for a sustainable future. *Balance-Unbalance* was proposing that we ask ourselves: "What we will be calling 'nature' in 20, 50 or 100 years? How we will live in the future? How can creativity help us shape a society of understanding and interconnectedness? What role could transdisciplinary thought and action play in reimaging a sustainable future?"

The fourth iteration of *Balance-Unbalance* was held in 2015. It was hosted by Arizona State University and its main focus was "Water, Climate and Place: Reimagining Environments." The subject reflected some particularly relevant circumstances considering the location of the conference was in the southwestern desert of the United States [4].

In 2016, *Balance-Unbalance* was hosted by the University of Caldas in Manizales, Colombia, and had more than 1,000 attendants registered. This city is part of the coffee-growing axis and is built in a mountainous region with seismic instability. A rich, changing and challenging environment, with a subtropical highland climate and an average of 1,500 mm (59 in) of precipitation a year, allowed participants to have a contrasting experience considering the places where the previous conferences were held [5].

In 2014, *Leonardo* published a selection of short papers from the third *Balance-Unbalance* [6]. Now it is publishing texts that were presented at the fourth and fifth conferences. Papers from the sixth BunB, held in the UK in 2017 at Plymouth University [7], in collaboration with the Eden Project, North Devon's UNESCO Biosphere Reserve, Beaford Arts, Fulldome UK, and Leonardo/ISAST itself, are currently under consideration for future publication.

"art! ⋈ climate"

The "*art!* ⋈ climate" contests use art as a catalyst in helping to build bridges between sound artists and specific humanitarian actions related to climate change. Both the process and the outcomes of this initiative highlight the value of integrating creative approaches into humanitarian work for complex risk management issues. Three events have been organized since 2012 by the Red Cross/Red Crescent Climate Centre, in collaboration with the Electronic Arts Experimentation and Research Centre (CEIArtE) of the National University of Tres de Febrero in Argentina.

The "*art!* ⋈ climate" project became possible as a creation-knowledge-action proposal to reach those who are already affected or in imminent danger of the consequences of climate change, and also to help those who are not yet directly touched by it. The project can be seen as a tool, but it is no less artistic for being that. On the contrary, the principal idea here grows from a cooperative effort, having powerful means based on artistic creations—with a value independent of its potential functionality—and simultaneously, a tangible application in humanitarian actions. The Red Cross/Red Crescent Climate Centre finds the "*art!* ⋈ climate" project to be helpful, according to its goals and objectives.

The Climate Centre's mission is to help address the humanitarian consequences of climate change and extreme weather events. In its efforts to engage people at risk, it has become clear that information is rarely sufficient to trigger behavior change. As a result, the Climate Centre is designing and facilitating methods for learning and dialogue that involve not only the brainpower but also the emotions of participants. The "*art!* ⋈ climate" contests have two main objectives: a) to provide the Climate Centre with sound-based art material that can support their actions; and b) to improve knowledge about the human dimensions of the environmental crisis and promote awareness about the effects of climate change, both among creative artists and among those exposed to their work.

Some of the subjects (or categories) that the contests have been addressing are: Mosquitoes [8,9]; Sea Level Rise; Zero Poverty. Zero Emissions. Within a Generation [10,11]; Timescales (weather vs. climate); and Thresholds [12].

EChO

EChO is a project that focuses on how the media arts have responded to the challenging problems of the environmental crisis, looking forward toward an increased role for media artists. It seeks to understand how art has served and can further serve as an essential link between science, social science, activism, and policy formation.

There are many projects by artists and artist-related organizations working in the field of media arts that focus on environmental problems. There are also many governmental, intergovernmental and non-governmental organizations, as well as private institutions, searching for solutions to the ecological danger for human life at either the local, regional or global level. EChO's goal is to connect, hence empower initiatives from around the world. EChO is proposing to match a public online database devoted to electronic art projects centering on environmental issues with a social network, to facilitate communication between people, initiatives and projects. It has an openly proactive orientation as it seeks to produce knowledge that could be used for inspiring and enabling collective actions, connecting media art projects involving science and digital technologies.

Such a transformational knowledge network will facilitate the generation of links among similar art-science-technology projects around the world, empowering and helping to connect key players (research groups, humanitarian organizations, policy makers, artists' associations, opinion formers, technology innovators, etc.) that have similar interests.

This project proposes to create links to give power to otherwise unrelated initiatives and actions. The fundamental concept supporting EChO is to create a network to develop forces large enough to turn good will into actions. EChO is still in an early stage of development, but many people are convinced of its potential benefits in a variety of ways. EChO wants to help build a network that should not duplicate other efforts and that would extend our possibilities to learn from each other.

Conclusion

In this context of global threats: Can the media arts and artists help? Yes. Everyone has a responsibility in the construction of the future, artists too. We can reflect, research and create. We can act and also invite others to reflect, engage, envision and act.

A large part of the population is living in uncertainty [regarding basic needs] and many people are barely surviving. When the *Balance-Unbalance* project started several years ago, it probably appeared to be a naive, good—will based, utopian initiative, trying to join intelligence and forces from a variety of fields by using e-art as a catalyst to face a problem we all share: the environmental crisis. Bringing people from very different sectors of society together, today *Balance-Unbalance* and its associated projects are not only proving that it is feasible to connect artistic creation and realistic tools for change, but it can help in making that social transformation happen.

References and Notes

1. Balance-Unbalance (2010): <www.ceiarteuntref.edu.ar/eq-deseq-en>.

2. Balance-Unbalance (2011): <www.balance-unbalance2011.hexagram.ca/>.

3. Balance-Unbalance (2013): <www.balance-unbalance2013.org>.

4. Balance-Unbalance (2015): <www.balance-unbalance2015.org>.

5. Balance-Unbalance (2016): <www.balance-unbalance2016.org>.

6. R. Dal Farra, guest ed. "Papers from the 3rd Balance-Unbalance International Conference," *Leonardo* **47**, No. 5, 489–514 (2014).

7. Balance-Unbalance (2017), <www.balance-unbalance2017.org/>.

8. "*art!* ⋈ climate" (2012), Call 1 <www.ceiarteuntref.edu.ar/art_climate>.

9. "*art!* ⋈ climate" (2012), Selected Works - Contest 1 <www.ceiarteuntref.edu.ar/art_climate_selected_works>.

10. "*art!* ⋈ climate" (2014), Call 2 <www.ceiarteuntref.edu.ar/art_climate_2014>.

11. "*art!* ⋈ climate" (2014), Selected Works - Contest 2 <www.ceiarteuntref.edu.ar/arteclima_2014_final>.

12. "*art!* ⋈ climate" (2017), Call 3 <www.ceiarteuntref.edu.ar/art_climate_2017>.

All sites were accessed on 4 September 2017.