Breaking Paradigms: Electronic Arts & Humanitarian Actions

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Abstract

The equilibrium between a healthy environment, the energy our society needs to maintain or improve this lifestyle and the interconnected economies could pass more quickly than expected from the current complex balance to a complete new reality where human beings would need to be as creative as never before to survive. Environmental problems, economic uncertainty and political complexity have been around for a long time. What was different before was the speed and depth of transformations compared with today's sudden changes. The frequent occurrence and severity that certain weather and climate-related events are having around us is increasing, and the ability of human beings on modifying adjacent surroundings as well as distant places have turn into a power capable of altering the planet. Have electronic art a role in all this? Have electronic artists a responsibility in this context? Aiming to use electronic art as a catalyst with the intent of engendering a deeper awareness and creating lasting intellectual working partnerships in solving our global environmental crisis, three initiatives were launched: *Balance-Unbalance*, '*art*! ⋈ *climate*' and EChO.

Keywords

Electronic arts, media arts, sound arts, humanitarian actions, climate change, environmental crisis.

Introduction

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 interconnected economies could pass more quickly than expected from the current complex balance to a complete new reality where unbalance would be the rule and human beings would need to be as creative as never before to survive. Environmental problems, economic uncertainty and political complexity have been around for a long time. What was different before was the speed and depth of transformations compared with today's sudden changes. The frequent occurrence and severity that certain weather and climate-related events are having around us - such as floods, twisters, etc. - is increasing, and the ability of human beings on modifying adjacent surroundings as well as

very distant places have turn into a power capable of altering the whole planet.

The global climate is changing, and communities around the world are suffering the consequences. Traditional disaster management approaches are not enough to deal with rising risks, and new forms of collaboration are needed to inspire people and organizations to link knowledge with action. Have computer artists a responsibility in this context? Have computer art a role in all this?

Artists could inspire new explorations regarding how to actively participate in this major challenge of our environmental crisis. We need to develop innovative ways to facilitate a paradigm shift towards a sustainable future. We need to discuss proposals for the future from a diversity of cultural perspectives and socio-economic 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, but a matter of survival.

Aiming to use digital art as a catalyst with the intent of engendering a deeper awareness and creating lasting intellectual working partnerships in helping to solve our environmental crisis, three initiatives were launched and have been well received by the international community of computer-based 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 the global society to understand the magnitude of the crisis we are facing, and in promoting the awareness around environmental matters. And it could also be a very good vehicle to disseminate proposals that could produce changes in our 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 life on Earth.

The *Balance-Unbalance* project was launched with an international conference in 2010, aiming to develop the role of the media arts and artists in dealing with environmental challenges. *Balance-Unbalance* explores intersections between nature, art, science, technology and society as we are moving into an era of unprecedented ecological threats. The first conference was held in Buenos Aires, Argentina and was named in Spanish "Equilibrio-Desequilibrio". It was organized by the Electronic Arts Research and Experimentation Centre (CEIArtE) from 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, artists coming from Argentina, Brazil and Canada, and an astrophysicist. [1]

Balance-Unbalance (a.k.a. BunB) 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 promotion of projects and actions regarding the environment and our responsibility at this crucial moment in history. This conference was possible thanks to the direct involvement of faculty from Concordia University coming from very diverse backgrounds, like communication, political sciences, geography, management, music, digital arts and design. 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 kind of innovative proposals, always considering digital art as the interconnecting hub and the environmental crisis as the umbrella covering us all. [2]

Once again in 2013, a third edition of *Balance-Unbalance* was showing the high potential of these actions. The expected catalyzer started to work and the digital arts were, step-by-step, leading the way. This time the conference was held at the Noosa biosphere, an ecological reserve recognized by UNESCO in Australia. The Noosa Biosphere is a dynamic learning laboratory for sustainability in one of the most pristine and diverse environments in Australia. The three-day conference took place at Central Queensland University, with satellite events in several other places, including Lake Cootharaba. [3]

An e-book with some of the papers presented at the 2013 *Balance-Unbalance* conference was published and it can be downloaded from the Internet for free. [4]

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 to ask ourselves: "What we will be calling nature in 20, 50 or 100 years? How we will live in the future? How could creativity help us shape a society of understanding and interconnectedness? What role could transdisciplinary thought and action play in reimaging a sustainable future?" considering that: "All is interconnected. No person, no animal, no object or idea can exist independently. Our limited knowledge of life can be expanded, but to do so we need better ways to understand each other. This includes a deeper awareness of how different human societies can comprehend cultural differences and synergies. There is a dramatic need for a paradigm shift and we need to act now if we are going to survive as a species." (from the *Balance-Unbalance* 2013 website).

Like in previous editions, digital art was not only part of the papers in the form of theoretical analysis and proposals but a substantial component of the event. Works and papers by Nicolas Bullot, Krista Caballero, Frank Ekeberg, Hamilton Mestizo, Ian Clothier, Karola Obermueller, Sarah Pirrie, Roslyn Taplin, Peter Gilbert, Teresa Connors, Andrew Denton, Rene Burton, Damian Castaldi, Leah Barclay, Todd Ingalls, Mary Bates Neubauer, Suzon Fuks, Mónica Mendes, Pedro Ângelo, Nuno Correia, Jim Denley, Monika Brooks, Dale Gorfinkel, Garth Paine, Ben McMullen, Sabine Feisst, Andrea Polli, Julie Arrighi, Perdita Phillips, John Dahlsen, Michel van Dartel, Anne Nigten, Susan Davis, Tony Fry, Jodi Newcomb, Claudio Rivera-Seguel, John Coulter, Lisa Chandler, Ramón Guardans, Susan Frykberg, Daro Montag, Jordan Lacey, Paul James, Proyecto AbRiGo, Feral Arts and members of the Australian Forum for Acoustic Ecology, among others, were presented at Queensland Central University and the Noosa Regional Gallery, where also the Leweton Cultural Group was performing (traditional music and dance from Vanuatu's endangered islands). A number of artistic events were also held in partnership with the Floating Land festival and presented in Boreen Point and locations within the region. Fifteen short articles on research and creation projects presented during this conference have been published by The MIT Press on Leonardo, the Journal of the International Society for the Arts, Sciences and Technology, on a special section devoted to *Balance-Unbalance*. [5]

After the first *Balance-Unbalance* conference was held in Argentina in 2010, other associated initiatives were also produced: "Balance-Unbalance. Environmental Responsibility" ("Equilibrio-Desequilibrio. Responsabilidad medioambiental") was a digital arts exhibiton presented by CEIArtE at the National University of Lomas de Zamora, Buenos Aires province, in 2011. A second exhibition was presented at the same venue in 2012: "Balance-Unbalance. Sustainably economy, sustainable energy, habitable environment" ("Equilibrio-Desequilibrio. Economía sostenible, energía sustentable, medio ambiente habitable"). The third exhibition of the series was held in a central location of downtown Buenos Aires, the San Martin Cultural Centre, during the 2012 *Electronic November* large-scale festival of media arts: "Balance-Unbalance. Knowledge-Action in Times of Uncertainty" ("Equilibrio-Desequilibrio. Conocimiento-Acción en Tiempos de Incertidumbre"). In 2014, a new edition of this exhibition series was presented

at the original venue, the National University of Lomas de Zamora, under the name of "Balance-Unbalance. Posthumanity and Environment" ("Equilibrio-Desequilibrio. Posthumanidad y Medio Ambiente"). Always linking computer art with environmental issues, these exhibitions presented Internet works, electronic sculptures, video installations, telematic pieces, artistic interventions, site-specific interactive installations, electroacoustic and soundscape works as well as sound art installations by artists from Argentina, Austria, Brazil, Canada, Chile, Colombia, France, Italy, Mexico, The Netherlands, New Zealand, Portugal, South Korea, Spain, the United Kingdom, United States and Venezuela.

The fourth edition of *Balance-Unbalance* was held in March, 2015. It was hosted by Arizona State University and its main focus was set on: "Water, Climate and Place. Reimagining Environments". The subject reflects some particularly relevant circumstances considering the location: the Southwestern desert of the United States.

Balance-Unbalance 2016 is being organized in Manizales, Colombia. This city is part of the coffee-growers axis and it is built in a mountain region with seismic instability. A rich, changing and challenging environment, with a subtropical highland variety of climate and an average of 1,500 millimeters (59 inches) of precipitation a year, that will allow participants to have a contrasting experience considering the places where previous editions of the conference where held.

'art! ⋈ climate'

Sometimes experiments take their own way, and an unexpected positive consequence in the form of a project - with an excellent potential- becomes a possibility. *Balance-Unbalance* had no resources to invite keynote speakers for the conference but still we were able to bring in Dr. Pablo Suarez, Associate Director of the Red Cross / Red Crescent Climate Centre to Montreal for the conference in 2011. As a direct result of Dr. Suarez participation in *Balance-Unbalance*, the 'art! ⋈ climate' project was born shortly after. [6]

The Red Cross / Red Crescent Climate Centre and the Electronic Arts Research and Experimentation Centre (CEIArtE) joined forces to develop the *art! ⋈ climate* contest for the creation of digital sound-based art miniatures focusing on the environmental crisis and climate change related issues. 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, government agencies, academic institutions and other stakeholders, 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 (such as collaborative workshops, participatory games and short educational films, linking

information, decisions and consequences on disaster management).

The *art! ⋈ climate* contest had two main objectives: a) Provide the Climate Centre with sound-based art material that can support their actions; and b) 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.

The first *art! ⋈ climate* contest has been co-sponsored by Hexagram, the Research-Creation Centre in Media Arts and Technologies of Concordia University, Canada, the Central Queensland University and the Noosa Biosphere Reserve in Australia, and Leonardo/ISAST.

For this contest, sound art miniatures implied short creations of sound art/music produced using new technologies and encompassing what is known as soundscapes, electroacoustic and computer compositions, sonorizations, and sonifications.

The categories available for the contest were two: 'Mosquitoes' and 'Open Theme'. The 'Mosquitoes' category aimed to support initiatives to raise awareness and better manage the growing risk of malaria, dengue and other mosquito-borne diseases that are showing new regional and seasonal patterns due to changes in rainfall and temperature - an issue highlighted in several Red Cross projects in Africa, Asia and the Americas. The 'Open Theme' category invited submissions about other dimensions of changing environmental conditions.

The works were selected by a jury of internationally recognized composers and new media artists: Marc Battier, Andrés Burbano, Joel Chadabe, Ricardo Dal Farra, Alireza Farhang, Rajmil Fischman, Arturo Gervasoni, Leigh Landy, Fabián Luna, Raúl Minsburg, Jaime Oliver, Julien Ottavi, Garth Paine, Andrea Polli, Paul Rudy, Suzanne Thorpe, Barry Truax, Michel van Dartel, and members of the Climate Centre as well, finding that was possible to have good artistic works that could also fulfill the specific needs of an humanitarian organization for its daily field actions. Selected works came from sound artists and electroacoustic composers from all over the world: Argentina, Australia, Austria, Brazil, Canada, Colombia, Czeck Republic, France, Germany, Greece, Israel, Italy, Mexico, New Zealand, Peru, Portugal, Romania, Spain, The Netherlands, South-Korea, United Kingdom, United States and Venezuela. [7]

All pieces are now available in SoundCloud both for listening online and for downloading, under a Creative Commons license. [8]

Composing digital sound art miniatures proved to be a great way for musicians to stop being spectators and start to contribute actively to humanitarian goals.

A second contest was launched on October of 2014. This time, several organizations are teaming up: the original two organizers, CEIArtE and the Red Cross / Red Crescent Climate Centre, are now working together also with the Climate and Development Knowledge Network (CDKN), the International Institute for Environment and

Development (IIED), and the Overseas Development Institute (ODI). [9]

There are also two categories on this second *art! ⋈ climate* contest but are not the same proposed on the first instance. The categories are always defined according to the needs specified by the humanitarian organizations, on this opportunity they were: 'Sea level rise' and 'Zero poverty. Zero Emissions. Within one generation'. [10]

This new contest had two deadlines, the first one targeted the Climate and Development Days that were held in the context of the UN Climate Change Conference (United Nations Framework Convention on Climate Change - UNFCCC COP) in Lima, Peru during December 6 and 7, 2014. [11]

Four sound-art miniatures were selected from this round and one from each category was then publicly announced and shared during the international event.

The second and final deadlline, in February of 2015, allowed sound artists and composer more time to research and create their miniatures. Worth mentioning that there is no limit to the number of works to be selected by the artistic jury and the humanitarian organizations jury.

This time the artistic jury was composed by: Alex Adriaansens, Leah Barclay, Marc Battier, Sandeep Bhagwati, Adriana Casas, Joel Chadabe, John Coulter, Ricardo Dal Farra, David de Gandarias, Orlando Jacinto García, Goh Lee Kwang, Amin Hammami, Fernando Iazzetta, Adina Izarra, Leigh Landy, Neil Leonard III, Fabián Luna, Andra McCartney, Raúl Minsburg, David Monacchi, Daniel Quaranta, Jaime Reis, David Rothenberg and Rodrigo Sigal. Then members of the Climate Centre and associated organizations were working on the last part of the selection process, aiming to find the works that best fit with their humanitarian needs. Pieces came from sound artists and composers living in: Argentina, Australia, Brazil, Canada, Italy, Kosovo, Mexico, Portugal, South Korea, The Netherlands, United Kingdom and the United States.

The selected pieces have been already presented during the *Balance-Unbalance* 2015 conference in Arizona and the Festival Internacional de la Imagen 2015 in Manizales, Colombia, among other events. Same as with the first edition of *art! ⋈ climate*, they will be made available in SoundCloud for listening online and for downloading, and the Red Cross / Red Crescent Climate Centre -and associated humanitarian organizations- will be using them according to their field actions needs.

EChO

EChO is a project focusing on how the media arts have responded to the challenging problems of the environmental crisis, looking forward towards an increased role for the 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 media arts field and focusing 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 either at the local, regional or global level. EChO's goal is to connect, hence empower initiatives from around the world aiming to help in facing major ecological threats and finding solutions for a sustainable -and humanly livable-future.

EChO is proposing to match a public online database devoted to electronic art projects focusing on environmental issues with a virtual meeting point to facilitate communication. 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 using science and digital technologies.

A transformational knowledge network to facilitate the generation of links among similar art-science-technology projects around the world, empowering and helping them also to connect with key players (research groups, humanitarian organizations, policy makers, artists associations, opinion formers, technology innovators, etc.) having interests alike.

This project proposes to facilitate the building of links to give power to otherwise unrelated initiatives and actions.

ECHO will be cataloguing and analyzing efforts by media artists to represent the causes, nature, extent, and possible solutions to environmental problems ranging from climate change-related issues to hazardous waste disposal, habitat destruction, the introduction of invasive species, and many others. The resulting database will: create links between artists' projects and actions, and between artists and other possible partners. The outcomes of EChO will have the potential of converting limited-reach projects with significant potential into something that could influence an international community, and eventually develop and increase its original scope.

The information will be organized according to different criteria, currently under analysis. Some examples could be: disaster type (e.g. biological, geophysical, hydrological, climatological); consequences (e.g. drought, flood, storm, mass earth move); artworks characteristics (e.g. focus, supporting concepts, potential applications, methodologies, technical requirements, possibilities for achieving the goal of solving a specific environmental problem: water scarcity, air pollution, etc).

The fundamental concept supporting EChO is to create a network to develop forces large enough to turn good will into actions. It could be a way to analyze, test and promote artistic projects considering solutions for environmental problems defying our existence and life in general.

Conclusions

In this context of global threats: Can the electronic arts and artists help? Yes, we can help. Everyone has a responsibility in the construction of the future, electronic 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 barely surviving. When the *Balance-Unbalance* project started some years ago it probably appeared to be a naïve, good-will based, utopian initiative, trying to join intelligence and forces from a variety of fields in using e-art as a catalyst to face a problem we all share: the complex environmental crisis. Bringing people from very different sectors of society together, today *Balance-Unbalance* and its associated projects are not only proving it is feasible to connect artistic creation and realistic tools for change but to actually help in making that social changes could happen. The electronic arts as a driving force for…? Yes, the possibility to work on a project where artistic quality, knowledge building and humanitarian actions are all together in a balanced equation to confront the unbalance is feasible.

The '*art*! ⋈ *climate*' project became possible as a creation-knowledge-action proposal to reach those who are already affected or in imminent danger from the consequences of climate change, and also to those who are not directly touched by it yet. It can be seen as a tool but it is not 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 independently from its potential functionality- and simultaneously, a tangible application in humanitarian actions. The Red Cross / Red Crescent Climate Centre has found the '*art*! ⋈ *climate*' project helpful according to its goals and objectives. It seems to be a true collaboration that can have an effect on "real people" while preserving the significance and meaning of each contribution and action. [12]

EChO is still in an early stage of development but many people is convinced of its potential "benefits" in a variety of ways. EChO wants to help in building a network that should not duplicate other efforts and would extend our possibilities to learn from each other, empowering the significant actions that artists working with digital means could offer to face environmental challenges. Please, feel welcomed to share your thoughts and send your feedback about it.

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