Diana Domingues

> **She has an immense and multifaceted body of work, revealing an enormous talent opening to multiple dimensions. (...) And in my opinion, the contents in Diana's artworks suggest an absolute innovation, when she started facing the international digital art. She starts from Brazilian history and the traditions of Latin America. To sum up, if I had to characterize in some way the enormous body of work, I would say that it is a way to translate a radical mongrel syncretism.** *(*Àngel Kalenberg)[1]

Diana Domingues, describing herself as an artist-engineer, has always been interested in developing hermeneutic and metaphorical proposals of interactive complex systems that address the conditions, limits but also possibilities of the human-machine symbiosis in the 21st century. Since the '80ies she has been playing an influential role in shaping the Interactive and Digital Art field in South America, particularly in Brazil. Her work juxtaposes Brazilian and Latin American cultural heritage with modern technologies and discusses the tangible and intangible culture by weaving analogies to shamanic figures, trance, embodiments, actions in invisible worlds and magic. In this context she manifests the "digital ritual" as unique experiential and expanding dimension of the biological body in the "infraworlds of digital data" by creating intense, immersive environments using the internet, video projections, sensors and mixed/-reality media and caves.[2]

In the late 1970s and particularly in the 1990s she introduced pioneering actions, practices, and theoretical contributions to media art, digital art, and interactive art. In 1990, she established her role in the field of Art & Science in laboratories such as NTAV (until 2009) and then moved to Brasilia, where she founded **LART (Laboratory of Research in Art and TechnoScience)**. During this time, she became known as a curator of landmark events in Brazil, such as "Art in the XXI Century: The Humanization of Technologies" at MAC USP[3] and Memorial of America Latina in 1994, or "Cyberart: Zones of Interaction" at the 2nd Biennial of Mercosur in 1999/2000.

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[1] "Anilla Cultural Latino América - Europa en Uruguay, 5th International Online Congress" YouTube, March 20, 2023. https://www.youtube.com/watch?v=Qeh_2S0pdl0

[2] Ibid.

[3] http://www.mac.usp.br/mac/

Those events introduced Domingues to the international media art community [4]. After following an invitation from the Italian philosopher Mario Costa to participate at one of the infamous ARTMEDIA events in Salerno she started close collaborations with Roy Ascott, Derrick De Kerckhove, Fred Forest, etc. In the same period, she could develop her research particularly with Edmond Couchot at the Art et Technologies de l`Image in Paris, where she also completed her PostDoc research.

Diana Domingues is still director, professor and researcher at LART, where collaborative teams explore disruptive innovations, changes and challenges, as well as aesthetic, philosophical and anthropological questions of daily life and contemporary art. LART is a research platform for "New Leonardos," a term which Domingues coined for transdisciplinary practicing artists and scientists.

> *"In the past twenty years, we have observed a series of transformations in the way we map, measure and conceive of life, generating reflections about its boundaries and its complexity. (...) Diana Domingues is amongst those artists who have pioneered these transformations. Transformations of images, forms, and of consciousness.*
> *(Pat Badani) [5]*

METAMORPHOSIS OF ELECTRONIC IMAGES AND BIOLOGICAL BODIES

Since the '70s Diana Domingues is known in contemporary art. She started as a painter, graphic designer and eventually expanded her artistic profile to art and technology by using different materials. In her works, especially as a printmaker, she was already fascinated by various image processing and transformation techniques, which was later to run like a thread through her oeuvre. In 1977 she began to work with multimedia and the life of images, mixing different techniques such as video, video text and participatory multimedia environments. Back then she was intrigued by the migration processes of images from one medium to another, which culminated into a master thesis and two accompanying exhibitions at MAC USP with the title "Connexio: an electronic life for the images" and "Migrations" (1989), which was shown in different venues around Sao Paolo. Her PhD Thesis at PUC SP with the title "The electronic image and the poetics of metamorphosis" led to the exhibition of her multi-spacial

[4] "Entrevista com Diana Domingues" Wayback Machine. March 20, 2021.
https://web.archive.org/web/20090401213419/http://www.eca.usp.br/narrativas/intro/intro_por/narrativas/entrevistas/entrevista2.htm

[5] "Anilla Cultural Latino América - Europa en Uruguay, 5th International Online Congress" YouTube, March 20, 2023.
https://www.youtube.com/watch?v=Qeh_2S0pdl0

video installation **Paragens** at the 21st Biennial of São Paulo and FUNARTE´s Gallery Macumaína.

Domingues' first "participatory multimedia installations", as *Paragens*, focused on demonstrating the power of images, their transformations through electronic devices and their transformative effect on our memory. Combined with various materials and objects placed in the space and juxtaposed with the electronic images, photographs, projections and sounds, the installations brought unique immersive experiences to the visitors.

Taking inspiration from her husband's profession in medicine, in the '90s Domingues' work turned towards the exploration of the human body in its biological nature and functions. She discovered an immense aesthetic potential in medical images and devices for visualizing the interior of the body, such as medical ultrasound, thermography, X-ray, magnetic resonance, etc. At the same time, she began to observe profound changes in human living conditions and behavior through the increasing encounter with technologies in everyday life, which she started to reflect in her work by merging biological with synthetic systems.

Thus, already in 1994, Domingues started to combine art, techno-science and participative multimedia in her work, and manifested it in one of her most pioneering and iconic exhibits back at that time;

Under the title **Trans-E: The Body and the Technologies** diverse installations in four simultaneously shown environments were presented at The National Museum of Fine Arts in Rio de Janeiro and other venues and galleries in Brazil. *Trans-E* led visitors through four rooms that reflected the existential functions of the human body, such as birth, the heartbeat and digestion. Before the *Trans E*-series, visitors to art exhibitions were not accustomed to encountering medical topics in this way: medical books, videos, and other objects set the stage for large-scale projected fetal ultrasound images and CT scans of the heart, which changed according to visitors' speech and movements, detected by sensors scattered throughout the space.

Trans-E paved the way for Diana Domingues to have further contacts with national and international researchers and artists to organize large and influential exhibitions and conferences. One of them was the above-mentioned symposium and exhibition "Art in the XXI Century: The Humanization of Technologies" in 1995, which did not only open a groundbreaking discussion for experts from all over the world, but also established connections between Brazilian artists and the most important international artists, scientists, and institutions at the time, which continue to this day.

The involvement of computer language in the 1990s led Domingues' artistic output to an increased interactive aesthetic. *Trans- E* was followed by several other works, such as **Viscera (1995)** or **Enigma of a Stone (1997),** in which the artist intensively explored various concepts of image exchange, image-body relationships and transformations, most of the times by

means of self-developed sensor systems and hardware. *Enigma of a Stone* can be seen as her first interactive installation in which she was interested in the changing "life of the environment" controlled by the interaction of the visitor with the electronic sensory system that Domingues described as neural network. Following the shamanic belief that the stone is a veil between the real world and the world of spirits, a virtual living stone wall was created through a dance of mutating large projections of the Ingá Stone in northern Brazil, inviting visitors to participate in a kind of ritual to discover the riddles of the stone.

By creating what Diana called "cross-sensory experiences," she emphasized democratic interactions that required no prior knowledge but just the openness to experience different qualities of time in the mostly room-filling installations with pulsating images, objects, sounds and their directly associated body movements.

BETWEEN TRANCE AND ALGORITHM - THE RITUALIZED, INTERFACED BODY

Connected to her artistic practice, Domingues has also proposed several highly interesting and philosophical, technoscientific theories on the effects of body-cyberspace interaction. In 1997, the artist spent some time living with and learning from the traditions and rituals of the Kuikuru Indians in Brazil, where she found inspiration for those theories and her further art projects, e.g. **Trans E: My body, by blood (1997), Ouroboros (2002),** or **The Cavern of Trance (2004-07)**.

The installation *Trans-E: My body, my blood (1997),* which premiered at ISEA 1997 in Chicago, refers to rituals of Brazilian natives and their traditional body paintings, masks, dances, etc. In this immersive multi-media installation, Domingues invited the visitors to dive into an "electronic trance ritual" and experience "virtual hallucinations in real-time". In the second version of the piece *The Cavern of Trance*, the experience of trance was expanded by musical instruments of Brazilian rituals, such as maracas, whistles, rain sticks etc., which was intended to also invite physically impaired people to interact and participate. In this symbiosis between analog and digital, organic and inorganic, real and virtual, the interacting visitors should gain shamanic power while engaging with projected images and sounds of heartbeats. The movements of people captured by body heat sensors set in motion a red liquid placed in the center of the room that represented blood as an offering to life.

In her paper "Day-Dreaming States in Interfaced Environments: telematic rituals in *Ouroboros*"[6] Domingues addresses the anthropological effects of cyberspace and its interfaces. She speaks about body-augmented capacities that can only be experienced through the human body connected to cyberspace as a digital, numerical environment. Inspired by theories from artist

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[6] Domingues, Diana. "Day-Dreaming States in Interfaced Environments: Telematic Rituals in Ouroboros" (*Leonardo* 37, no. 4, August 11th, 2004) p. 309

and theorist Edmont Couchot, she refers to the „interfaced subject," which surpasses the human condition through hybridization of biological bodies and virtual worlds, and thus reaches a post-biological feeling, i.e. a post-biological form of existence. The moment we enter fictional, magical worlds of cyberspace, we experience unexpected, maybe also dream-like emotions. For Domingues this comes very close to a trance experience in rituals, in which access to "parallel worlds" is usually created collectively and - most importantly - by involving the entire body.

> ***"Body actions are translated into numerical unities, processing physical and mathematical laws, crossing quantum layers, receiving, and sending information, exploring behaviors of artificial worlds. By interacting we experience the poetic existence of memescapes inhabiting within artificial landscapes no longer made of earth, but of memory units. Interfaces and data extend gestures beyond the boundaries of the body, and our sensitivity can live in a new cognitive space as an extension of our sensory space."*** *(Diana Domingues)*[7]

Following the state of trance as a very characteristic element of interaction in Domingues work, she has drawn strong inspiration from mythological figures such as the Ouroboros serpent as well as Latin American shamanism and traditions in which blood, trance, embodiment, and the serpent life regeneration are central symbols. In her installations Domingues often frames the interaction as a ritualistic experience for the interactor, who should achieve an "ouroboric perception" to understand the mutual, circular and autopoietic dependencies of humanism, culture and technologies.

In her project **Ouroboros** from 2002 – an extended version of the web-based work **ISN(H)AK(R)ES (1998)** - Diana Domingues thematized the infinite principle of Ouroboros by connecting the artificial, virtual and real spaces and proposing the radical embodiment of a robot-snake through telematic interaction. Following the premise of the Ouroboros, where "the end is the beginning," the artwork was accessible through a website that led to four conceptually intertwined virtual and real environments, inviting visitors to interact on different levels and reflect digital-analog processes between humans, animals and artificial worlds; the online environment *Memories* enabled collective, associative hypertext creation on the topic of the serpent; in the *Serpentarium* visitors could remotely control the body of a snake robot via simple arrow keys that not only shared a serpentarium with a real snake at the Museum of Natural Sciences of the University of Caxias do Sul, but also was intended to take care of the real animal. Through a connected webcam and infrared sensors, interactors were able to observe the serpentarium and task the robot with giving water and feeding mice to the real reptile. In *Village,* an online VR environment led through the virtual perspective of a snake. The

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[7] Ibid.

fourth space *Terrarium* was a collaborative place to create and raise artificial serpents online based on DNA sequences from twelve species of snakes, which were translated into graphical parameters.

With Ouroboros Diana Domingues created a multi-dimensional telematic experience, a "teleimmersion", as she called it, "that explores behaviors of evolutionary computing, and includes genetic algorithms processing, generating simulated genetic behavior." (Domingues, 2004)

FROM HUMANIZATION TO NATURALIZATION OF TECHNOLOGIES

Echoing Oliver Sacks' quote "we must humanize technology before it dehumanizes us," Diana Domingues advocates for the humanization of technologies in her art since the 1990s, questioning the changes in post- or neo-biological and transhuman life triggered by technologies and their ability to profoundly alter ways of life.
In the past few years, she's been talking about the logical consequence of naturalizing technologies. To define this "new reality" and the human condition in the 21st century, where humans are now constantly producing and interacting with data, Domingues refers to the theories of embodied cognition and proposes the condition of a "biocybrid human" (= biological data, cyber and hybrid) who is constantly finding itself in "mobile enactive affective systems." In those systems our behavior and emotions are dependent on our "interfaced body," which is exposed to the "synthetic vision of mobile technology such as cameras, satellites, physiological sensors, Bluetooth, [etc.] that transmit and exchange data, and co-locate us in virtual and physical worlds, thus transforming us into biocybrid humans."[8]

> ***"Technologies now embody traces of biological systems, translating them into computerized paradigms, providing emotional experiences and expanding our consciousness. My intention is to review organic laws and proclaim the power of machines to control and extend natural life in this post-biological era."*** *(Diana Domingues)*

Then as now, Domingues still works transdisciplinary, with a team consisting of engineers, computer scientists, physiologists, but also people from other art fields such as dance or music and is currently further exploring the connections between entities in shamanic rituals and our daily experiences in enactive affective systems for measuring the body and its dialogues with the ecosystem. Here again she draws connections to the idea of the Ouroboros and talks about

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[8] Domingues, Diana. „Ouroboric perception and the effects of enactive affective systems to the naturalization of technologies" March 20, 2023. http://median.newmediacaucus.org/mestizo-technology-art-design-and-technoscience-in-latin-america/ouroboric-perception-and-the-effects-of-enactive-affective-systems-to-the-naturalization-of-technologies/

the seamless condition by the enaction of organisms, the technological apparatus, and the eco-cosmos in mutual exchange with data. By investing in these thoughts addressing data analytics and data culture, Domingues wants to enhance cultural beliefs and values.

The remarkable artistic career of Diana Domingues has yet to receive far more attention in terms of contribution to and influence on the international history of media art. Still a tireless artist and researcher at her advanced age, the artist has often been considered visionary and innovative in her artistic approaches, starting with her early interest in electronic imaging methods, which led on to the aestheticization of the interior of the human body and the connection of biological senses with technological sensors. After more than 50 years intensively exploring and observing ontological transformations between analog, digital, and virtual worlds, Diana Domingues sees us humans in a perpetual, interconnected state of trance that has become so natural to us that we are very unlikely to ever escape.

INTERVIEW WITH DIANA DOMINGUES:

As a young woman in Brazil in the 1970s working with computer and image technologies - how were you perceived by the people around you?

I think that being a woman has not influenced my role as an artist and researcher. I am sure that the influences and results are favored by my personal agency, my characteristics, my beliefs and challenges, my critical attitude and connections to people and things, and other everyday impacts present in my conceptual framework. The proximity to technical teams, studios, and labs, as well as my spirit and ability to provoke technologies, also remind me of the negative attitude some people had towards my artwork, which disappointed the established art circle. I spoke differently, and the rejection from other people was "normal." But I was convinced and very responsible for my inner laws. So, these reactions of people were at the same time a rupture of the information and expectations of the people around me, which triggered my reactions. I believe that the history of art shows what the real contributions are, which are always in dialogue with the inventions and scientific issues of the time. We are not out of our time. In parallel, the artist feels the atmosphere of life and reinvents his own language. Through this closeness, the artistic, aesthetic, technical and anthropological questions of humanity are posed and revived. Science is an intimate zone for creativity and for the reinvention of life.

How did you come to work with electronic media and then combine it with art?

Since the '70s, my artwork was placed in the hybrid territory of performance, prints and installation which included the visitor into the piece.
My husband was a pediatrician and in the '70s he used an electronic stethoscope to amplify the sound of the children's heart during the consultation. And this device inspired me to make the series: Electrourbs, Electroprints, (images) where daily objects were invaded by heart sounds.
In my exhibition ELECTROURBS in 1979 at N.O. Space, Porto Alegre and after in 1982 at Funarte, Galeria Macunaíma, I used an electronic stethoscope to create a heart sound landscape inside the white cube to fill the empty space. I added an oscilloscope connected to amplifiers and used the flux of electrical waves to visualize the cardiac sound traces inside the art space.

In another work, where visitors were invited to sit in a black Thonet balance chair, they were allowed to hear and record the visitor's blood flow. The cardiac sounds emitted by

the stethoscope were transformed into time-varying electrical voltages, corresponding to sound pressure visualized into a transduction of heart electrical waves. These electric voltages were displayed at the oscilloscope, and the viewer could visualize the waveform of the heart sounds which could also be heard simultaneously with the displayed waveform. Additionally, red neon lights installed in the environment setup, contrasted with the heart beatings, as the sounds of blood flow could be heard synchronically with the heart beatings. The reception of this work by the public was very positive, and many people reported that they felt great seeing their hearts in connection with the sounds and the ones mutating in the oscilloscope display.

In terms of enactive systems, my recent research, this piece announced topics of the inserted organism in the environment and the mutual exchanges of technological apparatuses. All these topics are enhanced in my actual artwork related to embodiments and enactive systems in body through the mutual exchanges of living systems, physiology and aesthetic appeal also in the realm of heath and creative technologies.

In the '90ies you started exploring medical technologies to visualize the inner world of our body, which was very exceptional and unusual for exhibition audience at that time. Can you remember how the visitors reacted to your unusual art installations?

The audience was fascinated in every way, it was a different territory or a very intimate moment that offered to discover life, to engage in the sensory experience and moments of the body in full work. The expansion of perception and unusual moments place a technological environment in the magical territory of reinvention of life.

The body and social aspect have always been addressed in your installations – and in many other interactive artworks -, but in your case especially in connection with the themes trance and rituals. How does technology and digitality come into play?

The body feels and the environment gains qualities of algorithms and devices confirming the embodied cognition. However, as the code itself is not art, but is used to constitute an artistic project, the software development of code and calculation and language operations take place with a view of interactions through aesthetic and social relations, based on perceptive theories and content construction that form a symbolic context for performative operations of those who experience the system. Erkki Huhtamo, in his seminal text "Cyberarts, codes and coders: contextualizing Software Art", points out that it is no longer the well-known slogan of John Berger "each image embodies ways of seeing", which could perhaps be modified by "each Software embodies ways of using". Many artists and some engineers became recognized artists

developers of software. Only to mention some pioneers of the long list: Myron Krueger, David Rokeby, the painting and drawing machines created by Harold Cohen, the artificial intelligence and robotic environments of Ken Rinaldo, the social interfaces for online communities of Bruce Damer's worlds, all of which are code authors. There is also the social software of art collectives such as etoy, the immersive virtual reality environments of Maurice Benayoun and Jean-Baptiste Barrière or the pioneers Edmond Couchot, Marie-Hélène Tramus and Michel Bret, the collaboration of Christa Sommerer and Laurent Mignnoneau with the scientist Tom Ray for artificial life, the productions of Jeffrey Shaw with ZKM programmers, among many other examples of software writing in collaboration between artists and scientists. Some artists invest in aesthetic qualities and modes of perception, in the subjective charge and in the surprises of interactions, others create alternatives for social groups. Thus, it is worth taking Howard Rheingold's statement that these are not hardware devices or software such as programming, but "social practices". These operations of use and their aesthetic bases are the subject of investigations in our artworks to facilitate the creation of environments marked by interactivity, immersion, ubiquity, mobility and autonomy, which modify the body existence and respective living maps.

Why do you propose the naturalization of technologies?

The limits of the human and the natural are exceeded, copulations of organisms and technologies in life phenomena are influencing daily narratives. The technological apparatus gains disruptive structures at every level and in every type of interactivity when it adapts the technologies used with other qualities that change the ways of life when they are allowed to enter data structures. It is routine to do things and solve tasks in the digital world. Synthetic shapes, social platforms, online services, so bizarre in the 90s, are quite familiar now. For example, the beginning of the computer use of the synthetic worlds in VR started to offer immersion and navigation in virtual scenes, considered an evasion of the material world. In the 90s, when Howard Rheingold visited Scott Fischer at Nasa´s Cave, and worn the head-mounted displays, he said: "Oh, My God, Cyberspace arrived" (RHEINGOLD) He was referring to William Gibson´s Neuromancer term: cyberspace (GIBSON, 1984) and affirming the immersion and navigation in data as the feeling of placelessness, evasion of organisms within synthetic data landscapes. However, very soon, the world was invaded by the cyberspace locative, ubiquitous, and mobile interfaces that offer the sense of been everywhere inside the material world connected to data. So, it is appropriated the Gibson´s assertive who coined the term Cyberspace when he proclaimed in the novel, Spook Country: a novel: "Oh my God, Cyberspace is everywhere" (GIBSON, 2007)

How did your usual working process look like, when designing and creating an artwork, like for example OUROBOROS? Did you program the interfaces by yourself, or did you have a collective you worked with?

Since 2010 I hold the position of Senior Visiting Professor at FGA/UnB, a very relevant position for art and science. There I first started with the Biomedical Engineering, and after with the Science, Technology and Health Program, at UnB Ceilandia. In addition, since 2013, I am a collaborating researcher at the Computing Institute, working in HCI researches, now dedicated to a socio-enactive project. One of the projects, entitled 'Reengineering Life: Creative Technologies for the Expanded Sensorium', is part of an international collaboration between LART/FGA/CNPq and the Camera Culture Media Lab at the Massachusetts Institute of Technology (MIT). Through this project, members of the LART research group have the opportunity to work in the environment of Camera Culture Media Lab at MIT.

Our "New Leonardos" and collaborative teams configure the methodological principles of transdisciplinary practices, turning boundaries of Contemporary Art and Science to the direction of innovative practices involving pioneer artists, established artists and the next generation of New Leonardos. It is a "bottom-up" atmosphere that brings together people who cannot exist in a rigid environment and seek a more sophisticated and fruitful integration between fields.

In your recent theories on human-technology symbiosis you talk about "mobile enactive systems". Can you please explain a bit more what you mean by this?

Mixed with life, cyberspace adds the digital technologies to humanities' ethnographic methods for the understanding of the effects of the seamless, nomadic, mobile, and ubiquitous condition. The computer disappears in the periphery (WEISER op. cit, 1995). The HCI design evolves from interactive to enactive systems, and increasingly blends with life, thanks to mobile technologies and location-based interfaces that allow intuitive connection to cyberspace. The category of enactive systems favors the embodied cognition. Or, it is about the complex system of interdependence between the technological apparatus, the organisms, and the environment in their mutual, reciprocal exchange in cognitive approaches and at the physiological level. This complex system provides the ecological perception as postulated by James Gibson's theories of perception (1986), now extended by the complexity of sensors, with synesthetic biofeedback, sending and processing vital data measured during the enactions. Networks and wireless connections increased the ubiquitous and mobile computing with data visualization, sensorial expansion, and cross-modal interactivity coming from complex relationships. In our researches, theories from phenomenology, cognitive

sciences, and biomedical engineering laws provide the foundations to Art and TechnoScience practices, by building a set of concepts and metaphors resulting of enactions, perception, and actions (NOÉ, 2002), affordances and ecological perception (GIBSON op cit, 1986), and my classification of ouroboric perception (DOMINGUES, 2017).

We are facing a transformation in life, of "nature itself" and the emergence of a technologized reality. Nowadays by the effects of mobile technologies as calm and transparent interfaces installed "in the periphery", proposed by Mark Weiser, the father of the ubiquitous computing, call for sensorial interfaces in the post-desktop era. The computer is mixed to the world and is almost invisible and goes to disappearing melting to the hybrid world. The computer such as other inventions and artifacts as the cars, the watchs, the planes are part of "periphery" and we interact with devices in transparent interfaces ways – by using   mobile and portable devices, sentient objects (Rheingold, 2002). The biocybrid human condition living by interacting with data, now is expanded the technologies that have gained biological tasks and are increasingly installed in our habitat. We experience mobility, locativity, ubiquity by actions everywhere when we are connected, and our organisms are in mutual exchanges with data and the hybrid physical environment. Interactive Art is really humanizing technologies. To see, to touch, to sensually experience algorithms, infrared waves, to capture invisible forces giving them visibility, to check organic laws give us many experiences of consciousness-propagation in a symbiosis of organic/inorganic life in this post-biological era... Interactive Art embodies traces of biological systems. Plants, human body signals: gestures, speeches, breath, heat, natural noises, water - all these biological phenomena are being translated into computerized paradigms. The body lives and unfolds out of itself during these connections. I believe in the next couple of years, people will normally and matter of factly use computer interfaces in all aspects of their lives and they will interact more and more. The interactions will intensify and will be rather TV-like, to use an analogy to our contemporary technological reality. New biological interfaces will be facilitated as permanent prostheses that are attached to us and in our bodies and thus we will be reinventing our lives and the ultimate nature of our species.

Could you maybe observe over the years how your artistic practice was perceived in Latin America compared to the rest of the world?

I am qualified as Latin American pioneer in Art and Technology. I don´t have geographical restrictions for my actions. Prices and recognitions coming from worldwide are confirmed in thousands of mentions in important publications. It is surprising for me the use of my art or the used references in a huge list of artistic,

scientific, academic mentions, embracing multiple domains. The authors focusing on different themes make references to my artworks and theoretical repertoire. All this makes me very proud, but also enhances my responsibility for responding to the challenges and transformation in Cultural and Art domains. It is important to highlight that when I started to propose the premise: "the humanization of technologies", in the 1990s, people´s discussions manifested critical and even apocalyptical opinions against my ideas. However, when nowadays the technologies are installed and playing a disruptive innovation role and are changing the ways of living, I can go ahead and affirm the naturalization of technologies, installed in our daily actions.