What role might art exert in light of the challenges posed by climate change, resource depletion, and the diverse political and cultural crises our societies face in the twenty-first century? The hypothesis guiding this book is born of Félix Guattari’s claim that in confronting the multi-faceted problems of our global political economy we need to develop a more complex analysis of nature, culture and technology, shifting from catastrophic, end-of-the world narratives to productive, generative, trans-species alliances for the sake of the sustainability of life on the planet. Because capitalism is no longer understood merely as a mode of production but as a system of semiotization, homogenization, and of transmission of forms of power over goods, labour and individuals, only the emergence of other relational subjective formations would be able to counteract the fixation of desire towards capital and its diverse crystallizations of power. New social practices, new aesthetic practices and new practices of the self in relation to the other are summoned to undertake an ethical-political reinvention of life. As Guattari argues, it is about reappropriating universes of value and paving the way for the emergence of processes of singularization involving a mutating subjectivity, a mutating socius, and a mutating environment. This book is engaged in thinking about the conjunction of the ecological turn in contemporary art and the attention given to matter in recent humanist scholarship as a way of exploring how new configurations of the world suggest new ways of being and acting in that world. Contributors explore the means by which art can act as an existential catalyst, providing ways of changing our modes of relation beyond traditional modes of representation and, in doing so, instituting transformation.
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Introduction

As our world changes so does art practice and the thinking of art. How are the problems we are confronting today both as individuals and as societies resonating within aesthetic creation? How can art, cultural becomings and institutional practice be considered in terms of environmental sustainability in the technologically-mediated era of the Anthropocene? How to reinvent modes of life when trying to make it compatible with the material and techno-scientific transformations brought about by advanced capitalism? How can we think new ethical modes that may anticipate sustainable social practices through the practice of art? How might the desire to live another world organize our everyday life in such a way that it may overturn the established order?

In light of the pressing urgencies brought about by ecological upheavals, degeneration of social relations and homogenization of habits of thought as a result of the subjecting mechanisms of advanced capitalism, both artistic and philosophical practice might concern the imagination of other subjective formations. The exploration of this hypothesis was the backbone question guiding the program of the two editions of the International Symposium Mutating ecologies in contemporary art, which is the source of this book. Félix Guattari claimed it is our duty to see to what extent each one of us can put into operation political, theoretical, libidinal and aesthetic, revolutionary machines that may accelerate the crystallization of a different mode of social organization. The impulse underlying the publication of this book follows Guattari’s mandate.

Organized by the research group AGI (Art, Globalization, Interculturality, University of Barcelona) and hosted in the MACBA’s Auditorium on December 1, 2016 and February 21, 2018, the symposiums sought to delve into the notion of an expanded – social, environmental and mental – ecology in the arts. The events brought together transdisciplinary artistic, cultural and curatorial proposals that dismantle traditional oppositional dualisms between mind-body, reason-emotion, human-animal, theory-practice, the material and the discursive, and the actual and the virtual, trying to think life and the world otherwise. The objective was to advance an understanding of art practice as provid-
ing different ways to comprehend, contest and interrogate our relation to the earth through discursive, visual and sensual strategies and methodologies, experimenting beyond disciplinary confinements and generating new posthuman subjectivities.

The symposiums departed from the premise that the Anthropocene and climate change not only define the biogeophysical planetary conditions in the early decades of the 21st century but also describes an unprecedented social and cultural space in which environmental crisis coexists with, and is related to, humanitarian disaster and multiple geopolitical conflicts on a global scale. Capitalism as a historical form of progress, biological determinism and cultural essentialism are today being imposed as dominant metanarratives. In this new territory, distinguished by structural inequalities and the rise of the logic of expulsions, the governmentality of our technologically-mediated societies operates according to a logic of manufactured risk with economies unfolding on the basis of a delusional boundless availability of natural reserves, ignoring the ecological limits of the planet. The understanding of the multi-faceted implications that these conditions entail for the sphere of relations between human and non-human entities and the configuration of possible political horizons remains an elemental issue for human sciences and the arts of our time.

The ecological paradigm of Félix Guattari constitutes an opportunity with which to consider the generative encounters between ethics, aesthetics and epistemologies in the era of the Anthropocene. In their gambit for an expanded approach to ecology that not only includes the natural (environment), but also the social (socius) and the mental (psyche) spheres, the analysis links planetary sustainability as the capability to think through these three registers. This methodology manages to grasp the toxic effects of the logic of advanced capitalism and neo-liberal globalization in a cognitive, social and structural level. As a way to assume our responsibility in the face of our historicity, our relations to the planet and other species become inseparable from the analysis of the power conditions and relations that define our location. As argued by the critical posthumanist, neomaterialist philosopher Rosi Braidotti, the challenge as well as the opportunity of living posthuman times consists in seizing the opportunities for new kinship systems with sexualized, racialized and naturalized otherness with which sustainable relations are built, fostering a life-centred egalitarianism that will anticipate a new social nexus.

The book *Mutating ecologies in contemporary art* seeks to expand on the value and the effectiveness of the philosophical tradition of vital materialism as a non-dualist model of political ecology that enables ways of imagining alternative forms of relation and political action. This model of thought nourishes
current artistic imagination, modulating compounds made of forces and materials, imbuing proposals that can be seen as going beyond blind spots of liberal individualism and deep ecology in the affirmation of the rhizomatic, embodied and embedded nature of subjectivity, which is inherently ethical. Just as we need a philosophy after nature it becomes imperative engaging in imagining an art after nature understood as a the practice of composing a common world that both expresses and conquers immanence as the plane upon which nomadic subjects build alternative ethical relations.

The artists, curators, philosophers, researchers, writers and art historians included in this book are working with environmental sustainability as a methodology, both as instituting practice and as a critique of institutional behaviours. The diverse contributions act out new possibilities of inhabiting another earth, another body and new forms of relation between and beyond humans on the basis of interdependence and mutual coexistence across species. The various voices gathered bring forward narratives, cartographies and figurations of the mutating universes of value taking place in our contemporary societies through the thinking and the practice of art. It is precisely the will to bridge theory and practice that explains the diverse character of the texts, shifting indistinctively from a more analytical to essayistic nature.

I want to thank all the agents that made possible the realization of the two editions of the symposium and the further development into this book publication. First of all, I want to deeply thank Anna Maria Guasch, Director of the Research Group AGI, University of Barcelona, for being so supportive of this initiative from the very beginning, both in relation to the production of the events and the funding of this book. I want to thank Pablo Martinez, head of Public Programs and Education at MACBA Museu d’Art Contemporani de Barcelona, for believing in the appropriateness of the two editions of the symposium to be hosted at MACBA Auditorium. My most sincere gratitude to every participant whose talks shaped a very interesting, critical, geographically and disciplinary diverse program: Maja and Reuben Fowkes, Anne Sauvagnargues, Anna-Maria Hällgreen, Mitra Azar, Joana Moll, Laura Benítez Valero, María Heras López, Marta Dahó, Radek Przedpelski, Helena Torres, Fiona Curran, Christine Mackey, Pablo DeSoto, Ila Nicole Sheren, Daniela Voss, Quelic Berga, Javier Melenchón, Pau Alsina, Hanna Husberg, Carles Garcia O’Dowd, Beatriz Regueira, Chiara Sgaramella, Alfredo Puente, Begonya Saez Tajafuerce, Claudia Villazón, Lukas Masewicz, Ignacio Acosta, Jean-Sébastien Laberge, Sergi

1 For further details on the program and the call for papers we launched on occasion on the symposium, visit https://artglobalizationinterculturality.com/activities/symposiums/.

Introduction
Selvas, Caterina Almirall and Quim Packard. I wish to thank all the contributors to this book for their disinterestedness and for being so patient and collaborative with all the editorial process. Last but not least, I want to thank Clàudia Baixeras Muñoz and Julia Ramírez Blanco for the technical assistance they provided during both editions of the symposium.

**Christian Alonso**

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2 Graphic and textual documentation can be found at http://caosmosis.net/.
In a speech to Congress on May 25th 1961 that asked for a commitment to billions of dollars of funding, United States President John Fitzgerald Kennedy famously stated: “I believe that this nation should commit itself to achieving the goal, before this decade is out, of landing a man on the moon and returning him safely to the Earth”. In the same speech of this oft quoted first pledge however, there were a number of further requests for funding to also support: the development of the *Rover* nuclear rocket to provide the means of further space exploration beyond the moon “to the very end of the solar system itself”; to develop and “accelerate the use of space satellites for world-wide communications”; to “give us at the earliest possible time a satellite system for world-wide weather observation.”

During the Cold War period this technological expansion out into space coincided with the nuclear arms race and the need to understand the effects of nuclear testing on the environment in order to prepare for the very real possibility of a post-nuclear landscape on Earth. The earthbound, underwater and atmospheric nuclear tests conducted throughout the late 1940s until the signing of the first Limited Test Ban Treaty in 1963 ushered in a new commitment to research in the earth sciences which led to a vision of the globe as an integrated political, technological and environmental space. Geophysical mapping of the oceans, the earth and the atmosphere tracked the polluting effects of radiation and the dispersal of fallout leading to the discovery of radiocarbon dating, awareness of the importance of carbon dioxide uptake by the Oceans and the discovery of a high level of fossil fuels circulating in the Earth’s atmosphere (DeLoughrey, 2014). This period of Cold War nuclear militarism and space exploration therefore extended US technological hegemony out into the global biosphere through visible demonstrations of techno-military expansionism at the same time as it began to codify the same biosphere as a pressing environmental concern. This led to the emergence of what Joseph Masco (2010, p.15) refers to as “the research questions that would ultimately inform a theory of climate change.”

In the 21st century president Kennedy's two objectives to advance weather observation and global communications via satellite technologies have begun to coalesce as global
communications and data production shift into the realm of informatic weather systems and “cloud” computing resulting in an electronic form of meteorology. This paper focuses on the semiotic and material instability of the cloud as it slips between references to the weather, pollution, time and data collection. Two digitally woven tapestries depicting moving clouds produced by the British artist Craigie Horsfield in 2008 will frame the discussion.

*Above the road east toward Taibique, El Hierro, 15 minutes, February 2002,* (2008) and *Above the road east toward Taibique, El Hierro, 16 minutes 25 seconds, February 2002,* (2008), present a pair of still images taken from one of the artist’s films and woven as large-scale tapestries. The tapestries offer a seductive image of clouds caught in movement complete with the strange visual blur that comes from a film still. By translating these ‘stills’ into a woven surface Horsfield manages to recapture the sense of time and duration that belongs not only to the image but also to the object itself, the cloud. The artist has frequently referred to his interest in ‘slow time’, a term he has adapted from the historian Fernand Braudel’s notion of ‘slow history’, where the longer durée of geographical and social time is mapped in tandem with the shorter-term fluctuations of ‘individual’ time. Within Horsfield’s broader practice incorporating the use of film and photography the focus is more commonly on social relations mapped through the artist’s long term engagement with specific communities of people. However, in these cloud images he can be seen to address questions of geographical and planetary time.

In these two images of clouds taken from different moments of the same film that the artist shot on the island of El Hierro in the Canary Islands in 2002, there has been a delay in their translation from the film into a different material surface in 2008. At the moment that the clouds were caught on film they were already in the process of disappearing, their forms in constant fluctuation and movement in response to the climatic conditions of the day. El Hierro is the smallest and most Western of the Canary Islands and sits at what was once perceived to be the ‘edge of the world’ between Europe, Africa and the Americas. Prior to the 1884 shift of the prime meridian line to Greenwich in London it was the southern tip of El Hierro that marked the zero line of longitude on the map known as the ‘ferro’ meridian, the point from which the European explorers reached out into the unknown and navigated their ships on to the ‘new’ world. Like the drifting clouds and water-laden air moving over its ground therefore, the island was subject to a shift in its geopolitical significance on the world stage.
The original film piece these images derive from, *El Hierro Conversation*, was the outcome of a project that Horsfield worked on between 2001 and 2004. The piece focused on the relation between people and place in order to map the island’s present time. It involved a series of filmed and oral interviews with the islanders over several years. The final film juxtaposes these collective oral histories with images of the volcanic landscape of the island and its relationship to weather and water. The landscape views that are interspersed within the moving narratives are treated as stilled photographic images and often depict little more than mist or cloud whose vaporous forms resist being fixed in either language or in image.

With Horsfield’s commitment to slow processes of production and presentation and through the transition from film to photograph to tapestry, we witness a rematerializing of the atmospheric image of the original clouds. They are now woven, becoming a mesh of interconnecting threads that merge foreground with background and surface image with material support. This re-presentation of the image of the cloud hints at an alternative form of signification in which a politics of the atmosphere might start to move into the picture. In this view, instead of the clarity of a satellite gaze there’s an acknowledgment that the view is always partial, obscured and subject to what we might call meteorological blind spots. Philosopher Peter Sloterdijk (2014, p.31) informs us that:

> No circumstance characterizes the cartographical act of the Modern Age – and *eo ipso* its way of thinking – more profoundly than the fact that no globe we have ever seen shows the earth’s atmosphere. Two-dimensional maps likewise provide views of airless territories. All older models of the earth neglect the atmospheric element as naturally as if there were a permanent agreement that only the solid merits depiction.

As rocket and satellite technologies developed in tandem during the 1960s and President Kennedy’s call to send a man to the moon was realized, new images emerged of the planet taken from the perspective of space. The critic Robin Kelsey (2011) has written about the presence of the clouds in the early NASA images of the Earth captured by the Apollo astronauts, arguing that their swirling presence introduced a new cartographic perspective that was no longer reducible to the notion of the grid traditionally used on maps and globes depicting the planet. Often treated as aerial photographs due to their sense of looking down at Earth from above, Kelsey points out that these images do not subscribe to aerial maps because of the presence of the clouds that obscure the view of the earth and the oceans, rendering it incomplete and flipping it
back to a more familiar view from the ground looking up at the sky. At this point in the early 21st century when information clouds now circle our planet "like a second atmosphere" (Sloterdijk, 2014, p.139) we would do well to hold these two perspectives of the earth from below and above in view at the same time.

The clouds drift. From the old world frontiers of El Hierro to the new world frontiers of outer space, to the emergence of the planetary technosphere, reaching out into "open" space is shown to be a powerful imaginary that seeks to obscure the material conditions and "slow violence" (Nixon, 2011) involved in the endeavor. As Sloterdijk (2014, p.11) cautions: "[Globalization] has been saturated in the systemic sense since the carriers of this reaching out into open space were forced to acknowledge that all initiatives are subject to the principle of reciprocity, and most offensives are connected back to the source after a certain processing time." This ‘processing time’ is now being coded in more explicitly geological and planetary terms as a consequence of theories of the Anthropocene. The atmosphere, we discover, has a memory.

The cloud drifts. It migrates from a vaporous weather condition and symbol of industrial and nuclear pollution to signify the moveable feast of global electronic storage space. In this transition it appears to dematerialize the technosphere ridding it of its material histories and untethering it from any connection with the ground. However, the whole explosion of extraplanetary and new communications technologies during the late twentieth and early twenty-first centuries has been supported by a vast terrestrial material infrastructure that continues to have profound implications for spatial politics across and surrounding the globe. Behind the informatic clouds accessed at the touch of a screen lie a world of material traces, social and environmental consequences and slow violence. From networks of cables to server farms, orbiting satellites, rare earth mineral mining, factory assembly lines and mountains of toxic e-waste. The cloud’s ecology mutates in the 21st century becoming natural and artificial, located and dispersed, material and immaterial.

From this point looking back, the legacy of space travel and improved global communications networks heralded by President Kennedy in 1961 not only contributes to an uneven picture of development on the ground but also to a vast sea of space junk that now orbits the planet, and a newly developing industry to ‘clean’ it up. In documenting the relentless pursuit of globalization in the West as a post-war norm, Sloterdijk (2014, p.196) describes its outcomes as those of:
A dynamized and comfort-animated artificial continent in the ocean of poverty... Any self-pampering endosphere built on stabilized luxury and chronic overabundance is an artificial construct that challenges probability. Its continued existence assumes a durable and, at first, more or less ignorable outside – not least the earth’s atmosphere, which is used by almost all actors as a global disposal site.

Not only is the Earth’s atmosphere catastrophically polluted but also, increasingly, its exosphere. Fears are growing that the presence of so much junk in space has the potential to seriously disrupt global communications and digital infrastructures on the ground in the same way that adverse weather conditions can affect communications through blocking signals and knocking out power lines. This all seems an ironic contrast to the optimism of the 1960s and the aim to send satellites into space in order to improve global communication and weather observation. Military-industrial and technological capital demonstrate their geographical reach as they stretch into old and new domains beneath and beyond the earth, from networks of underground bunkers to orbiting satellites and space junk. We can now be seen to dwell in what Sloterdijk (2004, p.237) refers to as an “absolutely artificial environment”. He proposes a social and spatialised atmospheric ontology of being-in-the-World where inhabitation is, necessarily, cohabitation. Humans and non-humans are condemned to live together in interdependent atmospheric surrounds where any notion of an exterior or independent outside has now disappeared.

Craigie Horsfield’s woven cloud tapestries capture a stilled atmospheric moment from the island of El Hierro of drifting clouds leaving the edge of what was once the ‘known’ world. In their rematerialization as woven images the tapestries speak of these entangled histories of the human and the technological, of reaching out towards new frontiers. The clouds come to signify a mutating ecology that now exists along a natural-technological continuum from drifting water vapour to nuclear fallout, to the relentless hum and heat of the server farm. The radical shift in temporal and material scales that is brought about by the Anthropocene can be seen to gesture towards a new atmospheric politics as the human, the technological, and the geological become more explicitly entangled and the distinctions between the natural and the artificial and the interior and exterior are blurred.
References


