

## **Art, Anthropocene and Technology: Exploring New Approaches to the Ecological Crisis**

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### **Abstract**

In the face of the ecological crisis that defines the Anthropocene, art emerges as a transformative force, interrogating not only the human impact on the planet but also the shifting relationship between nature, technology, and culture. This paper investigates how contemporary art practices, enriched by technological advancements, respond to the environmental challenges of the current epoch, offering new modes of perception and engagement with ecological issues. Through a multidisciplinary approach, it examines how artists employ cutting-edge technologies—such as artificial intelligence, immersive environments, bioart, and digital media—to create works that evoke both the devastation wrought by anthropogenic forces and the potential for ecological renewal. Drawing upon critical ecological theory and post-humanist thought, this study delves into how art reconfigures human agency within the broader web of life, urging a radical rethinking of our role in planetary ecosystems. In this context, art becomes a space for exploring the non-human, the post-anthropocentric, and the speculative, providing a forum for imagining futures where technology and nature are no longer seen in opposition, but as interwoven agents of transformation. Through an analysis of contemporary artworks, this paper proposes that art, far from being a passive reflection, is an active participant in the creation of new ontologies and ethical frameworks that address the pressing ecological crisis, advocating for a deeper, more symbiotic relationship with the Earth. In this context, we can highlight, as examples, the unsettling, accusatory, poetic installations of John Akomfrah, Ólafur Eliasson, Jennifer Allora & Guillermo Calzadilla, Ursula Biemann and Arthur Jafa.

*Keywords:* anthropocene, contemporary art, ecological renewal

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## Introduction

In a context marked by unprecedented environmental crises, contemporary art has played a crucial role in addressing the Anthropocene — a proposed geological epoch characterized by the human species becoming the dominant force shaping the planet's systems. Within this framework, the concept of “Fragile Ecologies” emerges, highlighting the vulnerability of natural ecosystems in the face of exploitation and environmental degradation. In the face of the ecological crisis that defines the Anthropocene, art emerges as a transformative force, interrogating not only the human impact on the planet but also the shifting relationship between nature, technology and culture. This presentation explores how contemporary art practices, enriched by technological advancements, respond to the environmental challenges of the current epoch, offering new modes of perception and engagement with ecological issues. Through a multidisciplinary approach, it examines how artists employ cutting-edge technologies—such as artificial intelligence, immersive environments, bioart, and digital media—to create works that evoke both the devastation wrought by anthropogenic forces and the potential for ecological renewal.

Art becomes a space for exploring the non-human, the post-anthropocentric, and the speculative, providing a forum for imagining futures where technology and nature are no longer seen in opposition, but as agents of transformation. Through an analysis of some contemporary artworks, this presentation proposes that art, far from being a passive reflection, is an active participant in the creation of new ontologies and ethical frameworks that address the pressing ecological crisis, advocating for a deeper, more symbiotic relationship with the Earth.

## The Anthropocene Context

The term Anthropocene was popularized, among others, by scientist Paul Crutzen in the early 2000's, and broadly calls attention to the consequences of global warming, the depletion of natural resources, and the serious impact of human intervention on nature. Paul Crutzen was a Dutch atmospheric chemist and Nobel Laureate in Chemistry (1995), renowned for his groundbreaking work on the ozone layer. However, he is also widely recognized for popularizing the concept of the Anthropocene, particularly through his influential article “Geology of Mankind” published in *Nature* in 2002 (Crutzen, 2002).

Crutzen argued that human activity had become such a dominant force on Earth that we had effectively exited the Holocene epoch and entered a new geological age: the Anthropocene. According to him, this epoch may have begun around the late 18th century, coinciding with the Industrial Revolution and the large-scale combustion of fossil fuels. From that point on, humans became a geological agent, capable of transforming the planet's climate, ecosystems, oceans, and biogeochemical cycles. Crutzen's proposal had a lasting impact, not only in the natural sciences but also across the humanities, arts, and social theory. The concept of the Anthropocene has become central to interdisciplinary debates on environmental crisis, ecological collapse, and the urgent need to rethink humanity's relationship with our planet.

Anthropocene brings into focus the materiality of the planet and the imminent ecological collapse. Naturally, this reality has significant implications for artistic discourses, as well as for the works and exhibitions that frequently engage with these issues. One of the earliest exhibitions to critically address industrial capitalism was *Fragile Ecologies: Contemporary Artists' Interpretations and Solutions* (The Queens Museum of Art, New York, 1992), curated

by Barbara Matilsky. The exhibition later became itinerant, underscoring its relevance in raising awareness about the ecological crisis and its consequences.

Another important issue within this Anthropocene context deserves attention. According to Irmgard Emmelhainz (*Art in the Anthropocene. Encounters among aesthetics, politics, environments and epistemology*, 2015), among other authors, we are witnessing a radical shift in the conditions of visibility and the transformation of the world into images—that is, the creation of a new point of view in which images are intrinsic. There is a transition from representation to being present (Emmelhainz, 2015).

Authors such as T.J. Demos (*Against the Anthropocene: Visual Culture and Environment Today*, 2017) critically examine how visual culture can both reproduce and resist dominant narratives of ecological collapse, calling for a shift toward environmental justice and decolonial aesthetics (Demos, 2017); Donna Haraway's concept of the "Chthulucene" (*Staying with the Trouble: Making Kin in the Chthulucene*, 2016) offers an alternative vision grounded in multispecies entanglements and collaborative survival, challenging anthropocentric logics. This concept is a critical alternative to the Anthropocene, because, rather than centering humans as dominant agents of planetary change (as in the Anthropocene), the "Chthulucene" calls for deep interconnection, multispecies collaboration, and the cultivation of new forms of kinship between human and nonhuman beings (Haraway, 2016). Bruno Latour (*Down to Earth*, 2018) and Jason Moore (*Anthropocene or Capitalocene? Nature, History, and the Crisis of Capitalism*, 2016) similarly interrogate the socio-political underpinnings of the Anthropocene, emphasizing its ties to capitalism and modernity (Latour, 2018; Moore, 2016).

In the field of visual arts, theorists like Heather Davis and Etienne Turpin (*Art in the Anthropocene: Encounters Among Aesthetics, Politics, Environments and Epistemologies*, 2015) have curated interdisciplinary dialogues that explore how artists engage with climate, affect, materiality, and representation in an era of ecological crisis (Davis; Turpin, 2015). These perspectives underscore the role of art not simply as a mirror of planetary distress, but as an active participant in reimagining environmental relations and futures.

### **Anthropocene, Art and Technology**

In fact, technology has enabled the realization of artistic projects—some remarkably complex, aesthetically sophisticated, and conceptually challenging—that operate within the vast and materially demanding realm of nature. In a sense, it is as if technology itself, while being a contributor to the Anthropocene, finds a form of redemption through this process, becoming a medium of critique, poetic resonance, or even metaphysical reflection. In this context, we can highlight, as examples, the unsettling, accusatory, or poetic installations of John Akomfrah, Ólafur Eliásson, Jennifer Allora & Guillermo Calzadilla, Ursula Biemann and Arthur Jafa.

John Akomfrah is a British-Ghanaian filmmaker and visual artist known for his innovative contributions to documentary cinema and video art. A founding member of the Black Audio Film Collective in 1982, Akomfrah's work critically explores themes of memory, post-colonialism, migration, identity, and the African diaspora. His films often blend archival footage with poetic narration and experimental montage techniques, challenging traditional narrative forms. More recent installations such as *Vertigo Sea* (2015) and *Purple* (2017) expand his practice into multi-screen video installations that reflect on environmental change

and the human condition. Akomfrah's oeuvre is marked by a deep engagement with historical consciousness and a commitment to reimagining the audiovisual archive.

Ólafur Eliásson is an Icelandic-Danish contemporary artist renowned for his large-scale installations and sculptures that engage with perception, movement, and the natural environment. Drawing on elements such as light, water, temperature, and spatial geometry, Eliásson creates immersive experiences that prompt viewers to reflect on their sensory and cognitive engagement with the world. Eliásson's practice is deeply informed by ecological and social concerns, emphasizing sustainability, collective experience, and the role of art in fostering environmental awareness. His work situates the viewer as an active participant, challenging the traditional passivity of art spectatorship.

Jennifer Allora and Guillermo Calzadilla are a collaborative artist duo known for their conceptually driven, interdisciplinary practice that spans sculpture, performance, video, and installation. Since beginning their collaboration in 1995, their work has critically examined themes such as geopolitics, colonial histories, militarism, ecology, and the intersections of culture and power. Based in Puerto Rico, Allora & Calzadilla often engage with site-specific contexts and use irony and symbolic materials to challenge dominant narratives. Through hybrid and often playful forms, they invite critical reflection on the socio-political conditions of contemporary life.

Ursula Biemann is a Swiss video artist, theorist, and curator whose work engages critically with themes of ecology, migration, gender, and the geopolitics of resources. Through a blend of documentary practices, scientific research, and speculative narratives, Biemann constructs video essays and installations that explore the complex entanglements between humans, technology, and the environment. Her work often investigates global systems—such as oil extraction, water politics, and climate change—through a postcolonial and ecofeminist lens. Her practice challenges dominant narratives of development and progress, advocating for alternative epistemologies and ecological justice.

Arthur Jafa is an American visual artist, filmmaker, and cinematographer whose work explores Black identity, cultural expression, and the aesthetics of Black life in the United States. Drawing from a wide range of sources—including found footage, music videos, cinema, and photography—Jafa constructs powerful visual essays that confront the complexities of race, trauma, and transcendence. Influenced by both avant-garde cinema and popular media, Jafa theorizes a “Black visual intonation”—a mode of aesthetics rooted in the lived realities and cultural practices of Black communities. His practice challenges dominant visual regimes and calls for new forms of representation that honor the complexity and beauty of Black life.

## Conclusion

In the context of the Anthropocene, contemporary artists increasingly engage with ecological concerns through the deliberate use of technology, creating a complex dialogue between artifice and nature. This relationship embodies a paradox: by employing artificial means—digital media, sensors, bioengineering, or interactive installations—artists aim to foreground the natural world and environmental fragility. Rather than distancing the audience from nature, technology serves as a critical tool that heightens awareness of ecological degradation and the intricate entanglements between human and non-human actors. This intersection of technology and nature in artistic practice challenges traditional binaries, proposing a

hybridized space where artificial and natural coexist and inform one another. Ultimately, the use of technology by artists not only reflects the pervasive impact of human activity on the planet but also acts as an evocative mechanism to foster ecological sensitivity and provoke critical reflection on humanity's role within the Earth system. Amid the chaotic world we inhabit, art may still possess the capacity to awaken consciousness, humanism, and a sense of beauty.

### **Declaration of Generative AI and AI-Assisted Technologies in the Writing Process**

The author declares that no AI or AI-assisted technologies have been used to generate, refine, or correct the content in the manuscript. The ideas, design, procedures, findings, analyses, and discussion are originally written and derived from careful and systematic conduct of the research.

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