

# Crying Sea, The Sound Installation: Artistic Considerations for Coexistence between Human and Technology

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## Abstract

As the discourse on Anthropocene grows, this exploratory research investigates the interrelationship and interconnectivity between humanity and technology by analyzing a sound art installation created by the author. *Crying Sea* is a sound installation that uses plastic wastes collected from the shore to create symbolic narratives and artistic experience connecting humans, objects, and nature through interactive digital technology. In this installation, the audiences are guided to walk over the wastes, and the sounds created by the footsteps are recorded in real-time, which then are distorted and amplified into disturbing sounds through speakers filling up the room. In analyzing this artwork, three theories from technological, philosophical, and ecological backgrounds were used; specifically, Bernard Stiegler's pharmakon theory, Donna Haraway's cyborg manifesto, and Timothy Morton's dark ecology theory. A common factor revealed from all three theories by analyzing the *Crying Sea* is that humans, technologies, and all other entities within nature are interconnected and resonated. The awareness of this recursive relationship allows us to consider sustainable balancing.

**Key Words:** Cyborg, Dark Ecology, Pharmakon, Philosophy of Technology, Sound Art Installation.

## I. INTRODUCTION

The term Anthropocene was popularized by Crutzen and Stoermer (2000) to describe the last two hundred years claiming that the earth has entered a new geological epoch as the global effects of human activities on the earth system have become more dominant than other natural influences in the past [1]. Across the Industrial Revolution, the Second World War, and the Digital Age in the present, there has been an increase in carbon dioxide and sudden sedimentation of radioactive materials due to the explosions of atomic bombs affecting the climate and the ecosystem. Additionally, there has been an increase of 'technofossils [2]', which are human-made wastes that do not decompose naturally, such as plastics. These technofossils are bringing changes beyond climate change and ecosystem but for a new geological era. Then again, there are also academics who are questioning the word 'Anthropocene' as an appropriate terminology for describing the current era caused by the rapid industrialization based on fossil fuels. They criticize that 'Anthropocene' is a discourse created from a Western-centered perspective distorting reality by shifting the responsi-

bility toward all human race. Instead, these academics propose the term Capitalocene, indicating the fundamental responsibility to the current changes the earth is facing [3-5]. Furthermore, a technology philosopher Bernard Stiegler proposes the term 'Neganthropocene' as the counter-concept beyond the banality of Anthropocene that divides the world into humans and our technology versus nature. He finds the possibility to overcome anthropocentric problems in the technological society based on a 'negentropic' value or as he called it, 'neganthropic' value [6]. As this debate entails, Anthropocene is mostly used to emphasize and criticize the destruction of the earth's environment through rapid industrialization and indiscriminate energy consumption under capitalist influence, rather than in its original scientific and geological significance. Moreover, it is becoming a metadiscourse with the addition of political and social disputes.

Among the disputes, it is worth noting that in recent Anthropocene discourses, the discussion is deviating from a single uniform argument to a diverse set of arguments showing various forms of perspectives and narratives. These diverse voices base their grounds on the ideology that

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we need to move from nature versus humankind, such as an environmental ideology of rejecting technology and returning to nature or objectifying clichéd images of nature as something aloof. Some even point out that we should not stay within the boundary of environmental activities but instead have to change the ways of production and consumption. Moreover, these anthropocentric arguments are expanding to the fields of arts and philosophy. For example, many artists, writers, and performers have tried various experimental artworks and movements to further examine this particular ecological epoch. Some of them have been able to successfully provide invaluable ideas for coexistence between urbanization, technology, and ecology [7]. On the other hand, some conceive our communities and societies as being made up of multiple species and people out of the centrality of humans [8,9]. Ultimately, they delve into the exploration of human relationships with the nonhuman, and thus, challenge the technology/nature or human/nature dichotomy. Besides, in the current pandemic situation where viruses threaten our daily lives, the philosopher Slavoj Žižek emphasizes a true awareness, saying that we need to think philosophically about the structures of pandemic fatigue and how society works [10]. Hans Rosling, the author of *Factfulness*, also states that we must change the way we see the world while coping with the crisis, indicating cognitive problems induced by our irrational instincts [11]. While these artistic and philosophical approaches provide no practical or feasible solutions, the exploratory disputes from different fields have the potential to broaden the perspectives and the possibility of solutions to the debate. In other words, the crisis that humanity and the environment face today require a more drastic troubleshooting and subversive grounds for breaking away from existing paradigms. Among various ways to explore the crisis, these philosophical and artistic approaches may be an appropriate way to expose and question issues of the Anthropocene.

Therefore, this research discusses how humanity interacts with the geosystem through technology and how they relate to each other through art pieces as an empirical study. To explore the interrelationship and the interconnectivity between humans, technology, and nature from the aspect of art, this paper first introduces the sound art installation including how it interacts with the audiences, then briefly explains how it was technically implemented, and finally investigates the connection between the sound artwork from three philosophical perspectives. The philosophical perspectives include a pharmakon view from a technology philosopher Bernard Stiegler, a cyborg view from a technoscientist Donna Haraway, and a dark ecology view from a philosopher Timothy Morton. These three views are theories that show more controversial and subversive insight-raising narratives about the Anthropocene era from a philosophical, technological, and ecological perspective than any other

natural science or socio-political perspective. Based on these theories, this research analyzes the sound installation and explores the artistic metaphors of the relationship between human, environment, technology, and its byproducts.

## II. *CRYING SEA*, INTERACTIVE SOUND INSTAALTION USING MARINE WASTE

*Crying Sea* (2017) created by Jungsun Park is an interactive sound installation in which marine plastic wastes from the Jeju Sea in South Korea are collected and arranged on the floor of the exhibition hall situated near the waste collection point. The audiences are guided to walk over the wastes, and the sounds created by the footsteps are recorded in real-time, which then are distorted and amplified into disturbing sounds through speakers filling up the room. In this installation, the audiences physically experience the wastes hearing the peculiar sounds with every step they take over the marine plastic wastes (Fig. 1). For the implementation of real-time interaction with the audience, the sound created when stepping onto the plastic wastes are recorded and processed through a computer program. During the computer processing, resonance-like sounds are symbolically used to distort and amplify the plastic crushing sounds into low-frequency reverberation in order to represent a crying sound of a sea.

This installation can be argued as an interactive artwork for exploring the Anthropocene era in several aspects: 1) it ignites a discourse on plastic wastes, 2) it provides a narrative connection between the audiences, wastes, and the sea through digital technology and 3) it experientially induces a change in thinking and behavior of the audiences. *Crying Sea* uses the plastic wastes collected from a shore near the exhibition site as a primary symbolic material (Fig. 2). These wastes are a representative byproduct of technological



Fig. 1. *Crying Sea* using marine plastic waste and interactive sound technology. (Exhibited at Jeju museum of art from December 22, 2017 to March 4, 2018), videos of *Crying Sea* are Available Online at <https://www.parkjungsun.com/crying-sea>



Fig. 2. Plastic wastes collected from a shore near the Jeju Museum Of Art.

development after industrialization. Plastics were created in the early 20th century in order to replace the expensive natural substances. It is one of the 'most used substances in the world [12],' and most of these produced plastics since its invention remains in the landfills of the Earth because they rarely decompose naturally. It is not surprising to hear that the accumulation of these wastes will create a unique stratum within 4.5 billion years. However, some artists and scientists have focused their exploration around the artistic and philosophical expandability of the anthropocentric argument regarding plastics, such as by creating (or finding) plastic stones and plastic organs. For example, 'Plastiglomerate' is a term for mineral assemblages that have been formed of beach sediment and melted plastic debris by bonfires. These assemblages were notably collected and investigated by oceanographer Charles Moore, Geologist Patricia Corcoran, and artist Kelly Jazvac [13]. Moreover, the plastiglomerates may be considered as a marker of the Anthropocene, as the investigators suggested, and yet, could also be seen as artistically inspiring ready-made sculptures. Further to this, another visual artist, Pinar Yoldas, has presented a speculative design project titled 'Ecosystem of Excess,' which depicts an artistic imagination of biological ecosystems for post-anthropocentric creatures, which was intended to detect and digest plastics [14,15].

In the sound installation, *Crying Sea*, disposable plastic bottles filling up the exhibition floor enforces audiences to physically experience the problem of global environmental pollution right before their eyes. As the audiences physically experience the plastic wastes by stepping on them, they also audibly experience the plastic wastes hearing the sound created through interactive digital technology. This audiovisual and textural interaction with the plastic wastes connects the audiences, the wastes, and the sea into one narrative. Through the process, the work allows the audiences to become aware that the marine plastic pollution or the global crisis is not irrelevant to themselves and that everything is connected and has a circular causality. This increased awareness may transform the reasoning of the audiences causing behavioral changes such as altering the life patterns of using and throwing away plastic. These experiential awakenings through artworks hold immense potential for igniting changes at individual levels.

### III. INTERRELATIONSHIP BETWEEN HUMANS, TECHNOLOGY, AND NATURE

#### 3.1. Pharmakon View, is Plastic Poison or Medicine?

Plastic problems have been regularly raised since, but plastic use is not something that can be eliminated or reduced easily. Plastic has become too widespread, too daily, and too connected to our lives. The numerous amounts of plastic produced, ironically, shows its high convenience and economic efficiency. As a byproduct of technological and industrial society, plastics have both pros and cons simultaneously. Technology philosopher Bernard Stiegler claims that the relationship between technology and humankind also has a pharmakon property and has both positive and negative attributes [16]. In this chapter, the entirety of the relationship between plastic and human is expanded from a technological perspective in order to examine technology and the byproducts, and their relationships with their creator, humankind.

The concept of milieu with an original meaning of one's environment or surroundings is officially mentioned in Georges Canguilhem's "The Living and Its Milieu, [17]" referring not only to the external (technical) environment but also the relationship of circumstance and conditions connected to organisms. Subsequently, a technology philosopher Gilbert Simondon provides the concept of associated milieu that expands the preexisting concept of milieu to the relationship with the technological objects [18,19], in which the subjects of the technology, the objects, and the environment all go through a psychic and collective transduction to associate, adjust, and coevolve into a transindividual relationship [20]. According to Simondon, the technological objects are not merely humanity's tools, as the technics cannot be defined as a means. Instead, they are the expressive medium and symbols of the transindividual relationship and have coexistence with humans [18]. Canguilhem and Simondon's technological milieu and the perspective of the relationship with humans are adopted by Stiegler, where he demonstrates 'that technics invent human beings and human beings invent technics' [21] and interprets that the invention of a technological object is identical to inventing a new 'relationship' between human and the technological object. As can be seen, Canguilhem to Simongdong to Stigler, many philosophers have actively considered the technology, which has been relatively excluded from the discussion of philosophy, and have explored the coexistence and symbiotic relationship with humans.

Stiegler especially interprets the milieu properties and relationship between humanity and technology as a pharmakon property, in which 'a poison may act as a medicine, but would also simultaneously strengthen the dependency on the poison, in which the user may not release him or herself from it' [16,22,23]. Depending on how it is used, the poison

may become the medicine, and the medicine may become the poison and may have benefits as well as malaise. Stiegler points out that humans are, at the basis, flawed existences, and have to supplement those through technology and tools – in other words, a prosthetic being. However, he also states that these technologies and tools, especially the byproducts after industrial Capitalism, will cause threats to humanity's existence if not using its pharmakonic property to turn them into medicine [16]. The digital technologies such as the internet, artificial intelligence, and algorithms discussed by Stiegler in the 'Automatic Society,' and the previously discussed Anthropocene and plastic problems may be seen as examples of how we should think of the pharmakonic technological objects in the milieu environment in which people and technology coalesce together.

The work *Crying Sea* recontextualizes the pharmakonic identity of plastic as both good and bad by collecting the plastic wastes that endangers the marine ecosystem and using it in an art piece. Recontextualization here does not refer to recycling in the perspective of production and consumption such as companies using discarded plastic to produce sneakers, clothes, or car parts, but to illuminate the narrative and history in an object in a new perspective. *Crying Sea* narrates the process of the plastic being thrown away by people, being placed into the museum, only to be stepped on by the subject again, creating a responsive reverberation. A plastic bottle may change its identity from a useful item to a trash, and even to an artistic work, depending on where it is put, and what relation it holds with the person. *Crying Sea* surpasses the black and white perspective of the plastic wastes and allows plastic wastes to become a transindividual item that create a pharmakonic multi-layer and complex narration according to the aspects of the relationship.

### 3.2. Cyborg View, Resonating Technology and Narrative

A technoscience scholar Donna Haraway has published two manifestos, one regarding the concept of cyborgs and the other of companion species, "A Cyborg Manifesto" and "The Companion Species Manifesto" respectively. In two manifestos, Haraway proposes that both cyborgs and companion species are hybrid identities due to fragmenting border between categories such as the organic and the technological, the human and the nonhuman, the living and the nonliving, the substance and the nonsubstance. In "A Cyborg Manifesto", Haraway defines a cyborg as a hybrid of machine and organism, a cybernetic organism related to telecommunication sciences, and focuses on subjects that are restructured to technological beings. In contrast, in "The Companion Species Manifesto," she focuses on the coevolutionary relationship between humans and organisms, especially between different species, through a 'companioning' sense [24, 25]. These concepts of cyborgs or companion species by Haraway differs from ecologism, which focuses mainly

on regulating nature and restoring the order, or from anthropocentrism, which normalizes the idea that humans and purebloods are superior. They are also clearly different from the critical views of technology that state technology is only a tool for human convenience and should be discarded once it poses a problem and revert to an organismic life. Haraway instead states that technology has shown its capability to create hybrids for humanity's 'worldly' survival and that it is an important bridge to the future of cyborg society. To Haraway, technoscience is not an exclusive property for humans, for all novel formations and arrangement activities surpass the boundaries between humans and nonhumans [26]. In other words, the core of these 'cyborg views' can be seen as 'relating' between entities beyond status and categorization, from humans to machines, animals, plants, living, nonliving, and even artificial objects.

Likewise, *Crying Sea*, uses digital technology to form a new relationship between the plastic wastes and the audiences. By rearranging the plastic bottles commonly regarded as an environmental hazard into a new context in the art exhibit, the audiences become aware of the history of their plastic consumption and consumer capitalism inherent in the plastic bottles. The experience is amplified through an integration of digital technology, which records the sounds that the audiences make (plastic crumbling under their feet), distorts the noise, and plays the processed sound back to audiences. Through this process of hearing the sounds caused by their actions, the audiences can symbolically experience the sound of *Crying Sea* creating a narrative imagination which is crucial for maximizing artistic experiences. This artwork is not intended to provide a concept of junk art, an art that uses garbage to create art pieces or to caution the audience about the use of plastic or enlighten them of recycling. Rather, assisted by the technology, the dumped plastics are recreated as objects that contain energy and message of the sea. It is a metaphor that humans, objects, and nature are connected and that it is an endless cycle. Moreover, like a cybernetic organism, it uses technology to listen to objects and interact with them, leading to a novel relationship between the beings.

### 3.3. Dark Ecology and Artistic Practice

A theorist, Timothy Morton, claims that 'nature' as something over 'there' is unnecessary in ecological reasoning. The ecological reasoning surpasses being used in the context of nature or environmentalism and is related not only to ecological sciences but also to arts, philosophy, literature, and even to industry, technology, and economy [27]. Moreover, his new ecological reasoning, the 'dark aesthetics,' include the dark, negative, multilayered reasoning such as hesitancy, uncertainty, melancholy, irony, ugliness, and horror rather than optimistic rhetoric of prevailing environmental

ideology. In the end, ecology is about how we can all coexist, in which entities are connected. Morton's mesh concept refers to this interconnection, where within the broad mesh of links, everything is connected strangely, and we will experience a profound encounter with other entities when we are aware of such [28]. People often recognize the imminent danger of the detrimental effects of environmental pollution and climate change and begin to feel depressed and helpless because the size of environmental problems is overwhelming. Through dark ecology, Morton emphasizes that dark experiences such as depression and loneliness are symptoms of an in-depth connection. Along with Stiegler's pharmakon view that poison needs to be turned into medicine and Haraway's view of establishing relationships surpassing the species barrier, Morton's perception of the mesh through dark ecology shares a view on interconnectivity, coexistence through relationships, not exclusion.

Morton especially repeatedly refers to art as a proper form to practice ecological reasoning. The same applies to Haraway's 'storytelling'; the experimental, open, and radical characteristics of the arts are the most suitable form to the complex and multi-layered narratives. The peculiar sounds created by the plastic, audience, and computer in *Crying Sea* disturbs and interferes with the conventional perspective that hails nature from 'that side' and condemns the almighty industrial Capitalism. As a matter of fact, *Crying Sea* is an amalgamation of noisiness, dirtiness, fear, and amusement. Some may hear a cautionary warning by the sea for plastic pollution, and others a cry of agony. Some may feel disgusted walking on a heap of trash, while others may feel remorse for an insensible use of plastic. Some may enjoy the computer sounds generated and play along with the sound. If people first felt dismal experiencing the darkness, then began to be puzzled, and finally ended the exhibition enjoying the interaction with the artwork, then it is presumable that the audience had experienced Morton's claimed process of dark ecology, which begins with depression, then mysteriousness, and ends with sweetness [28].

#### IV. CONCLUSION

Focusing on the rising Anthropocene discourse, this exploratory research investigates the relationship between humanity, technology, and nature through the analysis of a sound art installation created by the author. *Crying Sea* is an interactive sound installation that uses plastic wastes personally collected from the shore near the exhibition to represent the sound of the sea crying through digital technology. In analyzing this artwork, three theories from technological, philosophical, and ecological backgrounds were used; specifically, Stiegler's pharmakon, Haraway's cyborg,

and Morton's dark ecology. From this exploratory analysis, we were able to make several conclusions on technology (Fig. 3).

One is that technology is not a subject of pessimism or optimism. Like 'pharmakon,' it could be healing but also damaging, productive, and yet destructive. The other is that the border between technology and humans also has become crumbled, and that 'hybrid humans' that enhance their senses through technology and machines as 'cyborgs' are all linked to and commune with living and nonliving, material and nonmaterial entities. Lastly, technology and its byproducts are ultimately creating a collapse in the geosystem, but 'dark ecology' internalizes the melancholy and searches sweetness within it. A common factor revealed from all three theories, when reflected upon the *Crying Sea*, is interconnectivity and interrelationship. *Crying Sea* uses technological equipment and plastic waste to connect the audience to the sea. The animistic narrative and audible energy of 'the cry of the sea' connect the humans, technology, and nature, thereby producing resonance.

Humans, animals, plants, microorganisms, and artificial and technological objects coexist in a cyclic, recursive, and interconnected manner. Humankind's industrial capitalist system has ignored the concept of coexistence and has brought on problems such as environmental pollution, climate changes, disease spread, ecosystem destruction, and resource depletion, alerting us all. Haraway claims that the 'trouble' accompanied by coexistence should be accepted and lived with [29]. The current crisis is a 'trouble' that humanity has brought upon itself and simultaneously a 'trouble' for an Earth system to maintain balance. Meaning all entities in the ecosystem coexist in a cyclical and interconnected manner as they or we transform to acquire balance. Acknowledging the history and cycle of the plastic bottles that we use and discard and considering both the



Fig. 3. interconnectivity and interrelationship between human, nature, objects, technology, and narrative from the analysis of *Crying Sea* based on three philosophical views.

pros and cons of all the technology that we use daily may be inconvenient and uncomfortable, but it is mandatory to establish a desirable balance.

According to a statistician Hans Rosling, many people have an extremely negative perspective toward global problems and crises. He argues that they are clamoring for things to worsen, referring to an intuitive worldview driven by irrational instincts such as a gap instinct, negativity instinct, and urgency instinct, rather than using data, or statistics. He then suggests that we hold onto the fact that it is bad, but it is getting better. What it means to get better is not "don't worry" or "you don't have to care," but that you have to keep both mindsets that the situation can be bad and simultaneously good [8]. Similar to this Rosling's perspective, the three preceding theorists Stiegler, Haraway, and Morton consistently argue the importance of awakening consciousness for a better world that is not buried in either positivity or negativity.

The sound installation *Crying Sea* also provides such ambivalent artistic experiences and feelings of connectedness with another beings using interactive technology. In the exhibition, the sound that the audiences are making, directly related to their movements, may act as simple entertainment for those who are naïve, while for those who are not may induce dark and uncanny feelings awakening the consciousness toward a global problem. Some may experience embarrassment while some may play with that embarrassment. In the *Crying Sea*, humans, technology, and nature are all intertwined, provoking the coexistence of melancholy and amusement, production and destruction, waste and art. The interrelations of various beings endlessly transform, ultimately into a direction to achieve balance. In order for that to happen, sometimes positivity may be necessary, and sometimes negativity may, but an artistic approach is potentially a proper way to express this paradox.

In this presented research work, we analyzed sound artwork using digital technology to demonstrate the intertwined relationship between artistic creation and technology and their philosophical implications. As Stiegler mentioned, aesthetics in modern society is increasingly associated with creating and modifying the relationship to technology [30]. Today, arts practitioners are expected to take hybrid roles not only as artists but also as engineers and scientists. Under these issues, our paper proposes conceptual viewpoints for an interdisciplinary discussion and expansion of media arts and the philosophy of technology.

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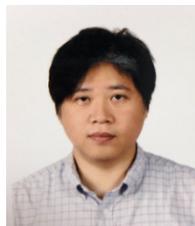
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