Art, Algorithms and the North Sea:

Decolonizing and Reimagining Human Perceptions of the North Sea

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Abstract

As a contribution to the interdisciplinary movement to decolonize fields across the social sciences and humanities, this thesis investigates how creatives reimagine the relationships that exist between humans and non-humans of the North Sea, by using automated technologies. Humans, automated tech, and environments co-create alternative visions of the relations that people share with the North Sea, meaning that they are interrelated entities that build on each other's work. This thesis combines Actor Network Theory (ANT) and Decolonial studies to study artworks and algorithms within sociological theory. ANT focuses on the connections between human and non-human entities and considers non-human agency within the forming of networks, whereas Decolonial studies help to identify disparities among living entities and envisage different intersections of science, art, technology, and ecology that are necessary to explore the multifaceted issue of viewing human to other-than-humans relations of the North Sea. Moreover, the topic aligns with other political and social affairs such as climate justice, which makes the investigation of alternative perceptions of our relation to the North Sea an important step towards decolonising the perception of 'nature'.

A document analysis of multi-media was conducted to analyse textual and audio material (podcasts) about artworks, as this method helps to systematically analyse the material into themes. Participant observation and semi-structured interviews allowed for a deeper understanding of the artist's motivations and decision making processes that is significant for this thesis. Empirical data was collected from different cases, among which Taal voor de Toekomst is at the core of this thesis. This project experiments with an algorithm (*AI Zee*) to create an ecological language that can express relations between beings. Two smaller cases complement the primary case, as they show a different way to co-create with AI to either personify the North Sea or try to see the world from a more-than-human point of view.

Keywords: Human – Nonhuman, Algorithms, Decolonialism, Art, Embassy of the North Sea

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1. Introduction

Our current geological epoch is commonly understood as the Anthropocene, which is characterized by the significant impact of humans on ecological systems (Latour, 2014). The influence of human activity on environments becomes evident as it is estimated that by 2050 there will be more plastic particles in the world's oceans than fish (Plastic Oceans, 2019). Human influence on our shared environments is manifested in asymmetrical relationships between living beings. These asymmetrical relations between humans and other beings are not only present in practical terms (e.g. extraction, pollution) but also in terms of political and social interactions. One example is how countries in the Global North approach ecological matters in terms of political representation. In the North Sea agreement of 2020, the North Sea is framed as a commons, which means " natural resources that are accessible to all members of a society"[1]. By framing the North Sea in this manner, the Sea's ability to influence and engage with the social world is not necessarily present, as it renders a one-sided relationship visible in which humans are in control of deciding who has 'access' to the North Sea.

Can we imagine the North Sea as a brother or sister, or as our neighbour? Is such conception even possible in our technocratic, neoliberal society? What does it take for us, in the global North, to reconsider our relationship to nature? And how can we imagine and organize ourselves to include non-human life into our social life? These questions fit a decolonial approach, as they criticise existing hierarchies between beings within knowledge production and stress the importance of including multiple and different realities (Rojas, 2016).

Zooming in: case studies in the Netherlands

Due to interesting developments in the Netherlands that seeks to include multiple and different realities into social discourses (e.g. speculative research projects like Parliament of Things, and FIBER lab for art, technology, and ecology), the topic of my thesis focuses on the nexus between humans and other-than-humans of the North Sea. In 2018, the Embassy of the North Sea was founded, after being inspired by Bruno Latour's Parliament of Things. This organisation is pleading for political, social and legal representation of the North Sea. They are investigating whether the North Sea can be officially recognised as a legal entity with its own rights, to safeguard and represent the wellbeing of marine life. According to the

[1] https://en.wikipedia.org/wiki/Commons

Embassy, marine life has voices and these should be considered in our perception of the social world (Ambassade van de Noordzee, 2020).

The starting point of this thesis is the conception of the North Sea as a living entity, which is inspired by the Embassy of the North Sea. Perceiving the North Sea as a living entity raises awareness to consider non-humans of the Sea as full members of our social world. This conception goes beyond understanding the North Sea as passive and with no agency. Instead, it experiments with conceiving the North Sea as a fully-fledged player in social, political, and legal spheres. The founding of the Embassy of the North Sea in 2018 and increasing academic literature on intersections of science, technology, ecology, and arts have enhanced sensitivity towards the importance of non-human agency and representation. This sensitivity is accompanied by a need and desire to reimagine the relationship and interaction between beings, for the sake of a more 'sustainable' future. The purpose of this thesis is to examine the role of art in pushing boundaries in Western interactions between humans and other beings.

One important and relevant project is "Taal voor de Toekomst, in geprek met de Noordzee" (TvdT). It is an experiment to bring the future, namely a post-anthropocentric society, into the now. In this post-Anthropocene, nature beings have a voice and there is no longer a hierarchy between humans and other-than-humans (Baaijens, 2021). One important element of this post-Anthropocene is an ecological language that articulates relations between beings and incorporates other-than-human perspectives. Language is a powerful tool that can render words into action; it has a performative character (Van Reekum, 2021). Language can also be an indicator of how we think about our environments. In the Netherlands, "nature" is understood as malleable (Baaijens, 2021). Words such as *bodembeheer*, *landschapsarchitectuur,* and *landinrichting* suggest human interference in the environment in a one-sided relation (Baaijens, 2021). Writer, biologist and explorer Arita Baaijens initiated the project Taal voor de Toekomst to experiment with an algorithm (*lerende taalmachine*) that can apply different language rules. The aim is to 'create' a polyphonic, ecological language that articulates relationality between beings. This case plays a central role in this thesis and is extensively discussed in the analysis section.

Two other smaller examples complement the central case, as the physical space of the sea is implemented into their artwork. The second case addresses a cube-shaped talking computer named Walter, which "meticulously observes the sea in motion through the eye its' lens and connects all different sea-states to our language" (Geeven, 2015). Since this machine

directly captures the state of the North Sea, the environment plays a more prominent role in co-creating the outcome compared to the project Taal voor de Toekomst. The third case is characterized by Theun Karelse's quest to find out what it is like to be a human-seaweed and porpoise. His research methods are rather exploratory, as he investigates his quest by immersing himself in the North Sea. He used technology (handmade waterproof speaker) to mimic the sound that porpoises make, and placed the speaker on his forehead – as sonar sounds are located in the frontal region of porpoises. ". In addition, he made a giant seaweed costume and experienced how it is to float in the sea like a seaweed. "Being a seaweed seems intensely disorienting. I lost all sense of direction until I spotted a cloud. Such a liminal existence." (T. Karelse, personal communication, May 26, 2021).

Figure 1: Retrieved from: http://theunkarelse.net/fieldwork.html

In this last case, the perspective of other-than-human life is brought to life.

Problem statement

The core problem upon which this thesis builds is the colonial legacy that prioritizes humans over non-humans and, hence, perpetuates hierarchical relations. As part of neo-colonial discourses, humans are often understood as central and active players in the social world we live in. In this same discourse, non-humans are understood as passive objects that are in no position to shape the realities of humans (Marres, 2015). Arturo Escobar (2020) has shown that this hierarchical order of relations between humans and non-humans is rooted in a capitalist system.

> "The entire edifice of modern Western civilization (with its particular forms of patriarchy, racism, and capitalist exploitation) is based on this objectivizing operation—on this dualist ontology, as we will call it— because it is based on a strict

separation between subject and object, reason and emotion, and many other dualisms" (Escobar, & Frye, 2020, p. 3).

The consequences of extraction and exploitation can be harmful to both humans and non-humans. In response, this thesis builds on Decolonial studies, as it considers different ways of producing knowledge that allows for multiple realities instead of a strict separation (Rojas, 2016).

Imagining through art

Art has the possibility of opening up more expansive forms of imagining ecological issues and non-human representation, as artworks can be innovative, challenging, uncomfortable, radical, moving. In particular, studying how algorithms are used in an art-based setting can help redefine human relations to non-human life, which is relevant for mapping out how humans co-create with algorithms to include multiple realities. Algorithms are a piece of program or software that carries out a specific task by a method that could be mathematical, but need not be (Wilkis in Grommé, 2020). The cases that are addressed in this thesis use language models that predict sentences based on the input, which are similar to feedback loops. Algorithms make "an intriguing art object — invisible yet omnipresent, proprietary yet pervasive, and with assumed socio-political powers that co-produce our lives" (De Vries, 2020, p. 7). And as de Vries (2020) suggests, it is interesting to explore what algorithms can 'do' beyond their technical capabilities. Since the use of algorithms is more integrated into our daily lives, it can be interesting to study algorithms in an art-based setting through a sociological lens. Drawing on Actor Network Theory (ANT) of algorithms and Decolonial Studies, I aim to explore how artists can help decolonize our perceptions and articulations of the North Sea. The focus will be on how artists use automated tech to create reimaginations of alternative relationships between humans and non-humans in the context of the North Sea.

The following research question is central for this thesis:

> *How do artists use automated tech such as algorithms to (collectively) reimagine relationships between humans and non-humans in the context of the North Sea?*

The next sub-questions are used to help answer the main question:

1. *How are existing relationships between humans and non-humans framed in the context of the North Sea?*
2. *What kind of imaginations do these algorithms enact?*
3. *How do artists use automated tech to generate these imaginations?*
4. *How do the imaginations relate to existing relationships?*

2. Theoretical framework

I will address the main research question by unfolding the three components co-creation, relationality, and reimagining alternative futures. Co-creation and relationality are closely related concepts, and it is therefore useful to discuss them collectively in this theoretical framework. By dissecting the main research question into these parts, the theoretical section sets out a defined basis on which the analysis can build on. As mentioned in the introduction, the two main theoretical bodies of literature that are discussed are Decolonial studies and Actor Network Theory (ANT) to address the notion of human-non-human. In addition, perspectives from Science, Technology & Society (STS) are used to discuss the notion of (artistic) algorithms, as more extensive literature is available on this topic[2].

The first paragraph examines co-creation and discusses the concept of non-human agency, (creative) algorithms, and human and other-than-human relations. Co-creation manifests itself in the collaboration between creatives, algorithms, and environments. The section continues along with ideas of other-than-human agency to examine the concept of relationality. The next paragraph discusses the interplay between humans, other-than-humans (Rojas, 2016), and the North Sea, employing perspectives of Decolonial studies that question the division between the "social" and "natural" world. The last paragraph examines the notion of reimagination.

Co-creation

1.1 Non-human agency

A necessary first step is to discuss and establish the notion of non-human agency, which builds on an Actor Network Theory (ANT) approach. An ANT approach focuses on the

[2] STS and ANT are closely related bodies of literature, however ANT focuses more on non-human actors within networks. STS discusses more broadly how technology and society are intertwined.

connections between human and non-human entities[3] and considers non-human agency within the forming of networks (Dankert, 2016). While the configuration of the politics of non-humans changes over time, social and political theorists have increasingly discussed the notion of non-humans as actors with moral and political capabilities since the late 20th century (Marres 2013; Marres 2015). By moving away from "a narrow framing of the political role of material things as 'mere means'", studies like posthumanism are rather interested in "the normative capacities of non-humans, their ability to engage, provoke, challenge, organize" (Latour 2005 in Marres, 2013, p. 32). One proposition of Actor Network Theory (ANT) suggests that the introduction of new entities (like non-humans) in societal spheres "involves much more than the *addition* of objects or knowledge to social and political life. It equally entails the *reconfiguration* of the social-material relations among which new entities are to be accommodated" (Marres, 2013, p. 89 emphasis in original).

An Actor Network Theory (ANT) approach "treats everything in the social and natural worlds as a continuously generated effect of the webs of relations within which they are located" (Law, 2009, p. 141). This focus on the web of relations is useful for the topic of my thesis, as the interplay between artists, automated tech, and environments plays a key role in my analysis. In addition, ANT relates to practices of relationality and materiality, which can be helpful to make sense of the interrelations between multiple entities and dimensions of the world we live in.

1.2 Algorithms as an active actor

Based on the studies Ramaswamy & Ozcan (2018) investigated, they determine that "technology and digitalization had changed how persons and things affected each other. Things were getting connected and smarter, and at the same time, persons were being equipped with new interfaces through which they could be engaged with other persons and things." (Ramaswamy & Ozcan, 2018, p. 197). Especially due to technology's innovative capacities, it is interesting to study these developments from a sociological standpoint. In this thesis algorithms play a central part, to help identify how algorithms can be used in the benefit of ecological matters. There is namely a growing tendency to view algorithms in a negative sense, as algorithms increasingly take over different tasks in society (e.g. automated decision

[3] In Actor Network Theory the term non-humans is most commonly used, which is the reason why it is reflected in the theoretical section. For my analysis I am using the term other-than-humans (by Rojas, 2016) as I feel this is more appropriate to use in the context of this topic.

making practices) with potentially unpleasant consequences (e.g. Dutch childcare benefit affair). In addition, the functionalities of algorithms are often obscured, since it is difficult to trace who is responsible for the actions made by algorithms because of their complex character (Grommé, 2020).

Algorithms themselves can be seen as having agency. According to Gillespie (2014), algorithms in the broadest sense "are encoded procedures for transforming input data into a desired output, based on specified calculations" (p. 167). Practically this means algorithms follow and carry out directions that are given in a mathematical sense, and these actions lead to particular outcomes. If we consider the situatedness of algorithms, it becomes clear that algorithms are produced, modified, and function in political spaces (Crawford, 2016). They are the gatekeepers of information flows through online platforms and similar media (Tufekci, 2015). Additionally, while algorithms are not living entities, they act to have a certain agency. As gatekeepers of information flows, their performance has real consequences when (human) bias and unfairness can seep through because of decision making practices taken in an earlier stage. There are many controversies around the effect, purpose, and future of algorithms in socio-technical fields, however the focus of my thesis is on the use of algorithms in artistic practices.

1.3 Creative algorithms

Algorithms can 'do' things beyond their technical capabilities that are artistic as well as political (de Vries, 2020, p. 8). De Vries (2020) focuses on the notion of anxiety (e.g. for algorithms that detect facial recognition). While her focus on algorithmic anxiety is not in line with the topic of this thesis, De Vries' (2020) engagement with artwork in analysing the algorithmic effect is rather valuable. De Vries (2020) argues that:

> "artworks position themselves as a source of visual knowledge, a witness to the hidden-from-view and difficult to access locations where algorithmic trading 'happens'. Artists locate and enter a hard-to perceive world and grapple with this invisibility by way of placing it in a specific light, which is characterized by making its vast terrain and secluded locations visible and known in a predominantly materialist and documentary style." (p. 66)

From this statement we can carefully determine that algorithms work in similar ways to infrastructures; they render particular information visible as well as obscure other kinds of

information (Star, 1999). At the same time, algorithms are also part of technical infrastructures, as they facilitate a flow of information through their functioning.

Alongside the increasing use of automated technologies in social interactions, this could perhaps also be the case for art scenes. Audry & Ippolito (2019, p. 1) state, "the question of whether machines can make art provokes very different answers from pioneers in the field"[4]. Leonel Moura in Audry & Ippolito (2019) argues that so-called "'Artbots' generate pictures from emergent properties that could not have been predicted by their creator, "they have at least some degree of creativity."" (ibid.). This points to the importance of examining the technical capabilities of algorithms that transcend human creativity. Another interpretation is explored in Leonard (2021), in which Millers (2019) indicates to "compare AI with the camera, which appeared to be a scientific instrument when it was first invented in the nineteenth century and only gradually revealed its artistic potential. This statement alone could suggest that AI and GAN algorithms are tools which can be used for human creative intentions" (p. 25). Interestingly, Deniz E. Kurt (2018) has a different view that transcends the idea that algorithms are merely a tool to create art. Kurt (2018) namely explores the understanding that algorithms are creative and artistic agents themselves in her dissertation 'Artistic Creativity in Artificial Intelligence'. This can be connected to an ANT approach that perceives other-than-human agencies.

Subsequently, this thesis discusses the interplay between artists, algorithms, and environments by focussing on the notion of co-creation. What can algorithms do in an art-based setting? How do they co-create? Cizek, Uricchio & Wolozin (2019) question to which extent co-creating with non-human systems (both living and machine) can be defined, and they realise this is a political and philosophical issue. For example, they question whether or not co-creation requires equivalent agency (Cizek, Uricchio & Wolozin, 2019), which at the same time questions whether human beings accept the possibility of other agencies (p. 4). They interestingly make a connection to the issues of animal consciousness[5], which have "remained largely outside the Western philosophical debate" (ibid.). René Descartes stated that "only humans were capable of rational thought and operated as conscious agents, while animals simply followed the instructions hardwired into their organs" (Cizek, Uricchio & Wolozin, 2019, p. 4), and this view of the 17th-century Enlightenment thinker had a profound

[4] The next question is then what is defined as art?
[5] These studies question whether consciousness among animals exists, if it has gradations, and its scope.

influence on Western thinking. However, current controversies reveal the importance of animal consciousness in social and ecological issues, and greater awareness is raised in academic literature (Meijer, 2016; Cornips, 2019; Ambassade van de Noordzee, 2020). Cizek et al. (2019) continue their argument by stating that the same questions of consciousness and agency may apply to machines. Machines can then not only be understood as tools but as co-creators that are inspired by biological systems (Cizek et al., 2019, p. 5). In addition, they question what implications different AI systems can have on agency and the possibility for creative partnerships.

> "Is machine learning akin to training a pet, or might reasoning and knowledge representation-based AI systems yield more robust forms of creative interaction? Then, how we might know the answers to these questions provokes other sets of questions. Co-creative engagements might offer ways to test and interrogate the various configurations of intelligence and agency that AI systems, animals, plants, and even bacteria might display. *The parameters of co-creation — of ethically reframing who creates, how, and why — have newfound relevance to the extent that we grant, or even entertain, intelligence in some of these non-human entities."*
> (Cizek et al., 2019, p. 7, emphasis added)

In this quote, it becomes evident that co-creation with non-human entities is related to human capabilities to ascribe agency and intelligence to other-than-human beings. The issue of co-creation with non-human systems is inextricably linked to decolonial movements. For reframing who or what has the intelligence to create, it is necessary to view other-than-humans as full-fledged players that can influence our shared social world. This is in line with Indigenous epistemologies, as Indigenous scholar and new-media artist Jason Lewis explain that "Indigenous epistemologies are much better at respectfully accommodating the 'non-human.'" (Co-Creation Studio, 2019, p.1).

Relationality

By shifting the focus to a network of actors that all contribute in one way or another, the role of other-than-humans is taken seriously. According to Ramaswamy & Ozcan (2018), within networks there are shared objectives, and these are along with establishing connections important for interactional creation. De Jaegher, Peräkylä & Stevanovic (2016) conceptualize the organization of social interaction as relational sociology, "a perspective on social life that foregrounds unfolding relations rather than individual or collective substances" (p. 2).

2.1. Definition

According to Escobar (2020), radical relationality "refers to the fact that all entities that make up the world are so deeply interrelated that they have no intrinsic, separate existence by themselves. Modern epistemology grants entities a separate existence, thanks to the foundational premises of the separation between subject and object, mind and body, nature and humanity, reason and emotion, facts and values, us and them, and so forth" (p. xiii).

The concept of relationality is intrinsically related to the concept intersectionality. It namely "advocates for an integrated consideration of issues rather than a single-axis or single-issue based analysis" (Crenshaw, 1989 in Maina-Okori et al., 2017). The notion of relationality is useful to map out how different entities are related to each other, which makes it possible to view relations and interactions as part of a specific network. This in turn complements the notion of co-creation with other-than-humans, as relationality allows multiple realities to co-exist. This is demonstrated in Indigenous epistemologies, as their knowledge systems are rooted in the concept of relationality. For more than 50,000 years, Indigenous nations in North America have had intimate and vibrant relationships with the land, including water, plants, animals, birds, and all living things (Wilson 2015 in Maina-Okori et al., 2017). This coexistence has also been referred to as relationality, the recognition "that we, the land, the water, and all living creatures are related and, as relatives, we are meant to love and care for each other" (Wilson, 2015 in Maina-Okori et al., 2017). While this coexistence is mainly focused on interactions between living organisms, it perhaps could also be extended towards machines and other automated technologies.

2.2. Human, other-than-humans & the North Sea

To conceptualize the relationships between humans, other-than-humans and the North Sea, an ANT and Decolonial approach is essential. According to Bennet (2010), "the task at hand for humans is to find a more horizontal representation of the relation between human and nonhuman actants" (p. 98). She refers to Latour's 'notion of 'event, as he argues that entities react to certain events, they do not act themselves (Latour in Bennet, 2010, p. 103). This demonstrates a cross-cutting approach in which all entities react to certain events and no distinctions are made between entities. A similar approach is reflected in eco-feminism, as this framework "includes working for non-hierarchical relationships that recognize our interdependency, a commitment to cultural and biological diversity, a desire to end oppression of any kind, and a willingness to analyze the logic of domination and its material and

behavioural effects on human relationships and human interactions with the more-than human world" (Maina-Okori et al., 2017, p. 289). Altogether, viewing the relations between humans, other-than-humans and the North Sea is connected with the expansion of agency to more-than-human entities and decolonising hierarchies between entities.

Reimagining alternative futures

At last, the concept of (re)imagination is shortly discussed. Jasanoff (2015) argues that imagination should not only be ascribed to creative individuals, but she explains that "imagination also operates at an intersubjective level, uniting members of a social community in shared perceptions of futures that should or should not be realized." (p. 8). She does not explicitly refer to the notion of non-humans, which makes it unclear how non-humans relate to the social community that Jasonoff (2015) describes. For my thesis, however, it is necessary to explicitly include non-human agency to examine the interplay between artists and algorithms in reimagining our relationship to non-human life. Jasanoff (2015) continues by giving an overview of the notion of Imagined Communities by Benedict Anderson (1983), followed by Charles Taylor's (2004) understanding that "expanded the analysis of collective imaginations to address grand patterns of historical and political thought" (Jasanoff, 2015, p. 9). Subsequently, Appadurai (2002) transforms the idea of "imagination as fantasy to imagination as organized work and practices" (Jasanoff, 2015, p. 11). What we can take away from this, is that imaginations lead to action. By collectively thinking and believing in something it can become a reality, to a certain degree. Jasanoff (2015) mentions that imaginations can change, and this possibility to transform is relevant for my thesis topic. Even though there are existing imaginations about the relationship between humans and non-humans, this does not mean there can be no alternative ways of thinking about that relationship. Imaginations do not have to stick to boundaries, which makes them interesting to analyse especially for this thesis.

Not only do imaginations lead to action, how people think about the future also shapes their material and social world in the present. The way we prepare for our near future, for example, can determine our current practices, which means future, past and present are relational and intertwined mechanisms (Baas, van Hooff, Koopman, Lopez, McBrien and Veenhoven, 2020).

3. Methods

To analyse how creatives engage and use automated tech in practices of reimagining relationships between humans and non-humans of the North Sea, it is necessary to get a sense of what this particular algorithm can do in practice. Here the interaction between creatives, automated tech and environment is key; how do they work together? What is produced and how is it produced? This refers to the performative value of objects that are influenced by -and can influence social life (Marres, 2013). The methods I used to make sense of how creatives, automated tech and environment are related and co-create alternative imaginings of relationships derive from qualitative research, as these can help generate extensive material on how creatives use automated tech in their artworks with regard to their environment.

First, document analysis of multimedia provides contextual and detailed information in an accessible way. Next, and originating from ethnography, I conducted participant observation with Taal voor de Toekomst that is in the middle of 'practicing' with AI Zee. Participant observation in particular serves to identify the antagonistic character of algorithms, that is partly directed by the artist. At last, I conducted semi-structured interviews. These are useful to connect the three key components -creatives, automated tech and environment- as they build upon data acquired at an earlier stage to help redefine and guide the research towards theoretical saturation (Bryman, 2015). In the following sections, the above mentioned methods are further elaborated and the grounds on which these methods can help answer the main research question of this thesis becomes apparent.

Document analysis

Turning first to document analysis, this method allows the researcher to analyse and interpret documents around a topic that explores an understanding of meaning and expression through text (Bowen, 2009). One of the advantages of this method is that many of the data sources can be found online, and this digital medium is especially useful when doing research during a global pandemic. Next to textual documents, I also included audio and visual media in my document analysis. The aim of doing a document analysis that combines different types of media is to observe how the link between creatives, automated tech and environment interacts in the creation of reimaginations. Examples of visual media are the images of artworks or installations presented at websites of museums or artists such as AQUARIA — Or the Illusion of a Boxed Sea (2021), Ambassade van de Noordzee (2020), and FIBER audiovisual art, digital culture and electronic music (2021). An example of audio media that is

included is a series of podcasts by Arita Baaijens together with different experts (e.g. linguists, eco-sociologists), which is part of the project Taal voor de Toekomst (Baaijens & Stichting Living Landscapes, 2021). Analysing audio media in particular can be interesting since researchers are increasingly involved in finding alternative ways "to collect data that preserve the audio dimension—and journals are starting to embed links and media, allowing readers to listen." (Salmons, 2017, p.1). In Frankel and Beckman's work (1989) "audio-visual material is used as a 'lens' through which they observed a social phenomenon" (Figueroa, 2005, p. 3), and a similar approach is used to analyse the audio-visual material in this thesis. By viewing audio-visual material as a lens rather than the object of analysis (Figueroa, 2005), social interactions are showcased that allow topics and concepts to flow in a setting that is not particularly focused on written text.

In my document analysis, a multimedia approach is used to provide different dimensions of information that can create multidimensional content (Crowder & Marion, 2013, p. 82). Multimedia refers to types of media (audio, video, image and text), which can be used synergistically to create a harmonic whole (ibid.). Multimedia is relevant because humans listen while watching, and this makes it essential to analyse both types of media when exploring mean-making practices. This multimedia approach fits the art-based component of this thesis best, as it steps away from analysing isolating forms of knowledge production. Moreover, reimaginations are not fixed to boundaries, which is why analysing reimagination should not involve only analysing one type of media. The main points of focus for this research concern what information is shared through this type media and in what ways these different types of media interact with each other.

One limitation for using this method is my subjectivity, which possibly affected the way documents and other types of media were chosen and gathered (Bowen, 2009). Therefore, as a researcher it is important to be reflexive and mindful throughout the whole course of the research process, by for example adopting a transparent stance to explain the reasoning for including or excluding certain materials (Bryman, 2015).

Participant observation

The second method that is used for this thesis, namely participant observation, is derived from ethnographic research. This method is particularly valuable for the project Taal voor de Toekomst, in gesprek met de Noordzee (Stichting Living Landscapes, 2021). Due to my position as an intern, I was able to get access and do participant observation in an art-

based setting and experience first-hand how the specially designed algorithm is used in practice. In addition, participant observation allowed me to explore what is obscured in the production of AI answers. Participant observation "involves social interaction between the researcher and informants in the milieu of the latter" and an important feature of this method is "that the observer's own experience is considered an important and legitimate source of data" (Cassell & Symon, 2004, pp. 154-155). Cassel and Symon (2004, pp. 155-157) describe the steps that researchers undergo during participant observation as the following: entering the field (via a gatekeeper), conduct in the field, recording data and analysing data. It is important to note that the degree of participation and observation can vary in a particular setting and situation. I believe *participant-as-observer* fits my case best, as this means that the researcher "forms relationships and participates in activities but makes no secret of an intention to observe events" (Cassell & Symon, 2004, p. 154). I joined meetings (both experiments and dialogues) that involve the interplay between the "controller" or artist and the algorithm. During these meetings I observed how the controller adapts and tweaks the algorithm to work in a particular way, and I observed how the algorithm responds in return. Through participant observation, I intended to get a better understanding of how the artist and algorithm co-operate in creating alternative imaginations in how we view non-human life and the North Sea. By experiencing the actions of an algorithm first-hand, I believe this is a convenient way to learn about its social life. This method can also help locate unforeseen events or difficulties that otherwise would remain invisible. In essence, participant observation is useful to explore what automated tech can do in practice.

Semi-structured interviews

My final method entails semi-structured interviews that mediate perspectives of the creatives on a deeper level. These interviews can help explore narratives that build upon the findings of participant observation in more detail. In semi-structured interviews the researcher can prompt certain concepts during the dialogue that are important to help answer the main research question (Cassell & Symon, 2004, p. 79). While I used a conceptual framework for conducting the interviews (see appendix 1.1 for a topic list), I also left space open for the artist to discuss topics that they are engaged with. I believe it is necessary to let the dialogue flow to ensure that the artist could share their own conceptions, especially around topics such as reimagination, thinking beyond the human subject and pushing boundaries of existing (colonial) structures. The semi-structured interviews were conducted with creatives that

engage with automated tech (such as algorithms) that help reimagine relationships between humans and non-humans in the context of the North Sea. A snowball sampling was used to get access to different artists (Bryman, 2015). For the main case TvdT, I interviewed Arita Baaijens, writer and project manager, and Mark Ijzerman, media artist and controller of the algorithm. They work closely with AI Zee, in the sense that Mark Ijzerman submits the gathered text material into the algorithm and makes sure it meets the requirements, whereas Arita Baaijens selects the texts, sets up the parameters for the answer of AI Zee, and edits the answers.

For the two supplementary cases, I conducted an interview with Lotte Geeven, a visual and multi-media artist, and an online interview with dr. Thomas Grill, a media artist, technologist, and researcher of sound. Lotte Geeven is the initiator behind Walter (2015); she created the concept to personify the Sea using AI. The role of dr. Thomas Grill was to create a model for Walter, in which he set up the parameters for the algorithm. The research was done by mag. dr. Brigitte Krenn and the design and production of Walter were made by Miriam van Eck. To answering the main research question, the interviews with Lotte Geeven and Thomas Grill provide sufficient information. At last, I interviewed Theun Karelse, a creative who is part of the Delta Casus research group for the Embassy of the North Sea.

Ethical considerations

To do participant observation and semi-structured interviews, it is necessary to obtain consent from the participants. In my case, I obtained written consent from all participants to record the interviews. Throughout the research process, I informed the participants about their role in this research, about their rights (to anonymize, share only what they want to share, quit whenever they want, see appendix), how their information will be stored according to General Data Protection Regulation (GDPR) and how their information is used in my research. By doing so, I aimed to create a safe and secure environment in which the participants felt welcome to engage with this research.

Limitations

One common limitation of ethnographic research is a small sampling, resulting in difficulty to make general conclusions (Bryman, 2015). Since only three cases are addressed in this thesis, the findings of the analysis are not generalizable to the sample population of this thesis. However, Bryman (2015) argues that the aim of qualitative research is rather to generalize a theory out of the findings. A second limitation could be my position as an intern

at Taal voor de Toekomst, as I cannot approach the case from an entirely etic perspective (outsider). Nevertheless, the access and familiarity I gained through my internship can also be beneficial for this research, since an emic perspective often provides new and distinctive information.

4. Analysis

In the upcoming sections, empirical data that is gathered during my fieldwork is discussed and analysed. This is done as follows; first the case Taal voor de Toekomst is addressed, in which the concepts of co-creation, relationality and reimagination are thoroughly described. TvdT is supplemented by the two smaller cases, which provide a deeper exploration of the concepts. Following this outline, the analysis deals with the sub questions and ultimately gives an overview of the most important findings.

4.1 Taal voor de Toekomst, starting a dialogue with the North Sea

This project can be viewed as an artistic intervention that uses an algorithm to 'rewild' the Dutch 'technocratic' language. It is an experiment that attributes language not only to humans, as is currently the case. In the podcast 'Als dieren spreken', Arita Baaijens opens up the discussion about animal ethics along with sociolinguist prof. dr. Leonie Cornips (Baaijens & Stichting Living Landscapes, 2021). According to Cornips, language is made for humans, and more specifically a tool to make a distinction between humans and animals (ibid.). Animals can communicate, however not in terms of *language* as people have determined in the past (ibid.). The difference between human language and animal communication is that "human language is symbolic, using a set number of sounds (phonemes) and characters (alphabet), which allows ideas to be recorded and preserved" (Jose, 2021). This is part of the reason why animal communication is excluded from what humans perceive as language (Baaijens & Stichting Living Landscapes, 2021). The project Taal voor de Toekomst rejects this conception, alongside Cornips recent work on cow language, as it is assumed that animals communicate in terms of language; specifically body language and sounds[6]. Taal voor de Toekomst aims to create a language in which voices of animals and beings are taken seriously, and aims to incorporate them into our social discourse (A. Baaijens, personal communication, May 17, 2021).

[6] Cornips views language not only in terms of spoken or written words but also as body language and sounds (Baaijens & Stichting Living Landscapes, 2021).

Turning to the functionality and technical aspects of the algorithm, this section addresses how co-creation is reflected in the steps that are taken to generate an output. The type of algorithm that is used in TvdT is Generative Pretrained Transformer 2 (GPT-2), meaning a language model that predicts the next word in a sentence. Arita Baaijens was inspired by Tivon Rice's artistic use of GPT-2, as "three distinct A.I.s were trained: the SCIENTIST, the PHILOSOPHER, and the AUTHOR. The A.I.s each have their own personalities and are trained in literary work" (Session #3: Creating Dialogues With Non-Human Entities Using Neural Storytelling I, 2021). Rice worked together with Mark Ijzerman, a media artist who experiments with different types of technology in his work, and who is the current controller of the algorithm that is used in TvdT. According to Ijzerman, new technology can be used to "create an external brain that provides information on which we can reflect" (Baaijens & Stichting Living Landscapes, 2021). Moreover, he believes technology can be used to heighten people's senses in order to be more susceptible to their surroundings, as technology can "wrap up, compress and make it easier" to transport and highlight particular experiences in the open space (M. Ijzerman, personal communication, June 9, 2021). He states a key element of technology is often to recreate nature and its complexities, however this is not entirely possible as the complexity of nature begins in molecules and continues to build up (ibid.). In his own work, he engages with technology as a means to be inspired. He particularly appreciates technology with (perceived) agency (*eigen willetje*), as it provides interesting findings due to the complex parameters the controller can set. He states:

> "As an artist I find it interesting to develop systems with certain rules or use algorithms that are invented by universities (like GPT-2), in order to 'misuse' them to get inspired. They become a teammate, a sparring partner" (M. Ijzerman, personal communication, June 9, 2021).

Arita Baaijens similarly describes beneficial aspects of the algorithm. She states new technology plays a significant role in creating an ecological, innovative language in TvdT. In the interview and participant observation it became clear that the algorithm and the artist are interdependent; they build on each other's involvement. In TvdT, the algorithm is primed by texts and certain parameters are set by Arita Baaijens, which is discussed later in this chapter. Based on the settings, the algorithm processes a large amount of data to predict sentences and formulate an answer. At last, Arita edits the answers and finetunes a question (if necessary) for the next round. A loop could best visualize this interaction, as artist and algorithm

continue to build on each other's work. This iterative process is also reflected in Mark Ijzerman's work, as he gives the algorithm instructions but does not completely follow the next actions of the technology, which results in interesting and inspiring outcomes (M. Ijzerman, personal communication, June 9, 2021). The concept of co-creation is reflected in this iterative process; the going back and forth between technology and artist. This will be further highlighted after addressing the sub questions, which establish the concepts co-creation, relationality and reimagination.

4.2 Answering the sub questions

4.2.A How are existing relationships between humans and other-than-humans framed in the context of the North Sea?

As mentioned in the introduction, the Dutch government frames the North Sea as a commons in the North Sea agreement of 2020. This gives the impression that the North Sea is a space that can be claimed, yet also evokes a collective responsibility for the wellbeing of the North Sea. This particular framing appears to be of strategic importance, as it gives stakeholders greenlight to conduct (economic) activities on the North Sea. However, the question is whether the wellbeing of the North Sea is high on the agenda for these stakeholders. The fact that the perspective of the North Sea is not included in the North Sea agreement can reveal the conception of existing relationships between humans and other-than humans. TvdT acknowledges the neglect of incorporating other-than-human voices into social and political discourse, and it aims to treat the Sea as a living entity. Theun Karelse has also discussed a need for a more inclusive approach, in which other-than-humans are considered full-fledged players of our society. In addition, the objective of Lotte Geeven to personify the North Sea, by using emotions to connect, expresses a distanced and divided relation between humans and other-than-humans in current circumstances.

4.2.B. What kind of imaginations do these algorithms enact?

TvdT envisages a post-anthropocentric society in which humans are no longer central and language is no longer exclusively ascribed to humans. Creating this ecological language can help stimulate people to think; what if the Sea has a voice? What if the Sea spoke to me in this way? The algorithm has a significant role in creating this imagination, as the unique and poetical answers were not possible without its contribution. The answers are co-produced by Arita, the algorithm and the texts that were selected. It is important to address personal bias in selecting the texts, which has a great influence on the outcome of the algorithm. It is not valid

to state AI Zee is a complete and absolute representation of the North Sea, rather it is an experiment to plant the seed of the idea that nature has a voice. TvdT does not claim that the answers that AI Zee provides are in any way representative of the Sea, as it would contradict the intention of decolonizing knowledge instead of colonizing it. To refer to Lotte Geeven, the algorithm is more a reflection of the person who made it, which emphasizes the notion of co-creation. Namely, without human interference in the algorithm and the contribution of the algorithm the specific end product would not be possible.

The algorithms or model for Walter (2015) enacts a different imagination, one that brings the North Sea closer to humans, as its physical state is translated into words that are relatable for humans. The North Sea is namely babbling words that are linked to emotions. Walter acts as a bridge or mediator that makes it possible for people to understand the movement of the Sea. By attaching emotional words to physical traits of the Sea, brightness/dynamics/roughness, the algorithm manages to process information at that very moment and link it to word clouds that represent different emotions. Walter helps imagine the North Sea as a living entity, one with emotions that humans can relate to. In this sense, the algorithm contributes to ebb away the obscurity between the North Sea and humans.

4.2.C. How do artists use automated tech to generate these imaginations?

In TvdT, Arita Baaijens and Mark Ijzerman closely work together with AI Zee that results in interesting answers that express relations in words and allows other-than-human voices. Both artists believe AI Zee is a crucial player in the project, as processing and combining a large amount of texts in a short period would not be possible without the algorithm. Moreover, due to the contribution of AI Zee, interesting leap of thoughts are possible and new words are produced. The algorithm called AI Zee selects words and sentences from a ‘compost pile’ of texts, forms an answer that builds on the question that it is presented, and in the process makes interesting word combinations and new words. Baaijens, as a writer, enjoys rewriting the answer of AI Zee into short answers, as she feels inspires by the unusual output that AI Zee provides. The next paragraph shortly discusses the process of generating an answer from AI Zee.

This is a schematic display of the conditions that Arita Baaijens has to set in a program:

1. **INPUT** → Enter a question or sentence

2. **LENGTH** → Choose maximum word count for an answer (often this is 250-350 words)
3. **TEMPERATURE** → Choose a level of mixing on a scale of 1 (no mixing) to 10 (**a lot** of mixing). For Baaijens the ideal setting is 0,83.
4. **SAMPLES** → Choose how many different styles the algorithm will produce. One answer is namely based on one specific style (meaning book or another type of input material). Baaijens usually chooses 4 styles, resulting in approximately 1000 to 1400 words that are viewed as answers to the question.

After completing these settings, the algorithm copies and pastes the question to select words and generate the answer. Through sentiment analysis the algorithm selects fragments of input material and combines them to form an output. This results in a text that has no apparent structure, as the algorithm randomly, yet not entirely, mixes and puts together different words and sentences. The answers that the algorithm produces are used as a first draft; they function as inspiration sources. AI Zee generates bulk of text, and Arita Baaijens edits the texts into shorter answers. AI Zee plays a significant role in fabricating the final answers, as the bulk text generates new words and interesting combinations that result in surprising and undefined texts. Another benefit of using AI Zee is that the algorithm scans the text material and selects and combines words at a much faster pace than humans could do. The algorithm is therefore a tool to make leaps of thinking possible.

The algorithm is trained by inserting different texts, which were selected by Arita and myself. The texts vary from poems to marine biology dictionaries to 17th century overseas travel logs. Important conditions for selecting the texts were access to a digital publication, texts mainly in Dutch, and finally texts that are in some way related to water or marine life. The aim was to make sure the texts are prone to poetical and oracular language, by excluding official documents that use formal language for practical purposes. Especially formal policy documents are insensitive to voices of other-than-humans, as nature is viewed as malleable; it can be engineered and owned (A. Baaijens, personal communication, May 17, 2021).

For the installation Walter (2015) several programs were needed to enable the translation of the physical state of the Sea into the spoken words of the machine (see appendix 1 for visual material). Dr. Thomas Grill created the model himself and set up the parameters by which the model assesses the state of the Sea. Although a deeper exploration of this model

is useful to understand in more detail how information was processed, it transcends the scope of this thesis. Lotte Geeven introduced this digital oracle that gives the sea a voice, and she accomplished research beforehand, namely dividing words into word clouds along with students, and (Geeven site). In this case, the algorithm is programmed by the artist beforehand but directly works with the motion of the Sea, revealing co-creation between artist-algorithm-environment.

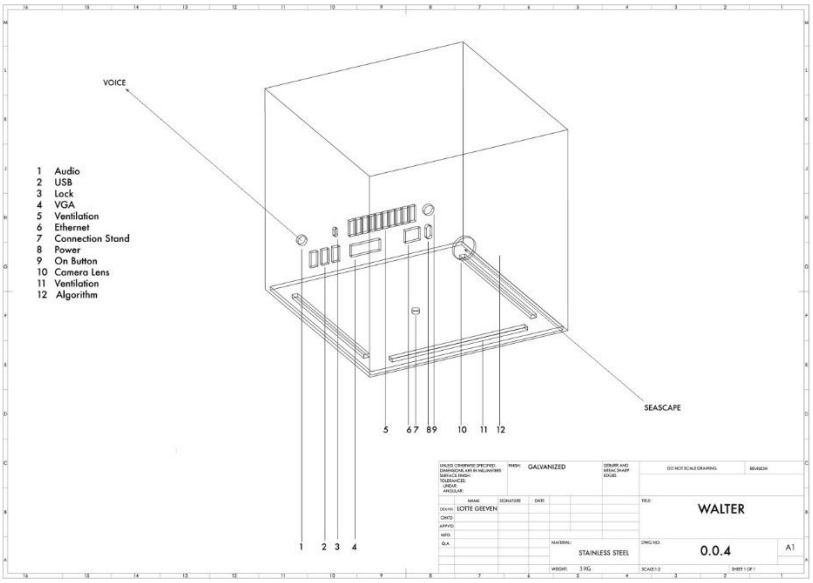

Figure 2: 'Machine drawing'. Retrieved from: https://www.geeven.nl/post/127157603580

Figure 3: 'Walter overlooking the north sea at the end of the pier. (artist impression)' Retrieved from: https://www.geeven.nl/post/127157603580

4.2.d. How do the imaginations relate to existing relationships?

The imaginations that Tvdt and Walter (2015) both enact a more relational and intimate relationship between humans and other-than-humans, compared to existing relationships with the North Sea. In both cases language is used as a tool to view living beings as equal players in our social world. According to Lotte Geeven, her objective was to establish the idea that the Sea is equivalent to humans, by turning it into a character that expresses emotions. In Theun Karelse's fieldwork, the objective to learn about new and different perspectives by making an imaginative leap into the mind of other-than-human beings spreads a clear message that humans can adapt to other-than-humans -instead of the other way around. His work contributes to decolonising the way we perceive human- other-than-human relations, as he advocates for rewilding the way we do research and co-exist with our environments.

4.3 Recapulating co-creation, relationality and reimagination

During my participant observation, I was invited to interpret an answer that was made by AI Zee (see appendix 3 to view the original answer made by AI Zee). Arita and I simultaneously began reading the one and a half page answer full of unusual word combinations. My fieldnotes explain what happened next:

> *I was still reading and continuously repeating the first sentences when I heard her chuckle. I had a feeling she already finished her answer, as I glanced over to her screen. She told me she scanned the text, claiming she knew what to look for because of her*

previous experience with editing the answers. So while I was struggling to understand the first sentences, she scanned the whole text, which I thought was really impressive.

The conclusion that can be drawn from this example, is that Arita is much more attuned to the ways the algorithm work. She is familiar with the functionality of the algorithm, which is reflected in her scanning the text at a faster pace compared to someone who is reading it for the first time. Since she selected the texts and set up the parameters herself, she has a significant amount of influence on the functionality of the algorithm. The final answers that Arita make are personal and unique, as the answers that AI Zee provide are open to multi-interpretations. Arita and AI Zee co-create a unique answer, which is not possible without either of them and the iterative process. Here the significance of other-than-humans is visible, as automated technology is perceived to have the ability to act and react. TvdT then shows it is not useful to make a distinction between humans and other-than-humans, as both artist and algorithm contribute significantly to the outcome. As a matter of fact, it would not be plausible without the interaction of human and automated technology.

This is also present in Walter (2015), as Lotte Geeven argues that the creator of the algorithm is reflected in the algorithm, one way or another (L. Geeven, personal communication, May 19, 2021). In this specific case, artists, algorithm and environment are directly linked to each other. Walter is influenced by the state of the sea and simultaneously translates this into a model that is made by humans. In turn, Walter processes and categorizes a large amount of data at a pace that transcends human capabilities. It can thus be argued that neither entity is singular; artist, algorithm and the Sea influence and relate to each other. In this example there is a fine line between co-creation and relationality.

As for reimaginations, TvdT, Walter (2015) and Theun Karelse's fieldwork for the Embassy of the North Sea all enact imaginations that lead to a different awareness of the natural environment. TvdT specifically tries to provoke humans with the idea that other-than-humans have voices and advocates the need to view them as equal players to our society. This last aspect is also reflected in Walter, however it expresses a language that is relatable to humans, and more importantly made *for* humans. This is done by ascribing a persona to the Sea, by using automated technology. In the last case, Theun Karelse advocates for rewilding not only our environments but also other fields of our society (T. Karelse, personal communication, May 26, 2021). Moreover, technology can be used to bring humans closer to

animals and plants, and he envisions a future where humans listen to and learn from their surroundings (ibid.).

5. Conclusion

This research aimed to explore how creatives use automated technology to reconsider human relations to other-than-humans and the North Sea. Creatives engage with and react to this issue, as current hierarchies and human activities have a negative impact on marine life and the North Sea. To find out how we can collectively reimagine our relation to the North Sea, this study focused on how creatives use new technologies in their artistic practices. The use of automated technology is interwoven in different fields of our society, and creatives react to this development by experimenting with them in an art-based setting. The benefit of using automated technologies in artistic practices is that they can process the information on a greater scale, resulting in outcomes that can transcend human capabilities. Automated technology can be used as a tool and as an intermediator, depending on the artist's vision of the project.

The main case that is addressed in this study is Taal voor de Toekomst, where the algorithm selects words and sentences of the "compost pile" and mixes them to formulate an output. This mixing happens in such a complex and high-speed manner that it would be impossible for humans to perform in a similar way. The algorithm is understood as a tool that makes leaps in thinking possible, after which the artist reformulates the output into a short answer. Without the algorithm, it would not be possible to create such answers, however according to the artist human work is still necessary to adjust the answers in a proper way. It then remains a co-production between artist and algorithm, in which both depend on each other's work. For the installation Walter (2015), the machine is more an intermediator that translates the state of the sea into spoken words. The algorithm detects whether the sea is calm or turbulent, and matches this to word clouds that have been established in a prior stage. The artist aimed to transform the sea into a persona, by transforming the state of the sea into a language that people can understand. Due to the voice element and the comprehensible language, Walter can be viewed as a device that brings the sea closer to humans. According to the artist, algorithms are reflections of the people that have made them, and this is something

we should be aware of. Walter is thus a clear example of a co-creation between the artist[7], the machine, and the sea.

By using algorithms that transcend human capabilities, creatives are working towards closing the gap that distances humans from the north sea. They do this by a) personify the North Sea and b) try to see the world from a more-than-human point of view. This latter is reflected in the work of Theun Karelse for the Embassy of the North Sea. He played sonar sounds of porpoises into a self-made waterproof speaker, placed this on his forehead and entered the underwater surface of the North Sea to recreate what it is like to "be a human-porpoise". According to Theun, this embodied and in-the-field method helped him to experience different and unusual details. In his other work he uses technology with the purpose to get closer to animals and other-than-human life. Moreover, he gets inspiration from Indigenous ways of living and dealing with environments, as he admires how they transfer knowledge about sustainable lifestyles for generations.

All things considered, the co-production between creatives and automated technology makes it possible to view the sea in a different light, bringing humans closer to non-humans in the sense that people can relate to the Sea in emotional terms (using a language that we can understand in Walter, viewing the sea as equal to humans). Document analysis of multi-media allowed me to explore different interfaces and conceptions of artistic practices concerning the North Sea. Participant observation and semi-structured interviews helped me to get a deeper understanding of how creatives engage with automated technologies in their work and to get familiar with their motivations and line of thoughts, such as their reasoning for using automated technology and create a different approach to view the sea in a different light.

While the small sample size limits the generalizability of the results, this approach provides new insight into the benefits of using automated technology in an artistic setting, which contributes to alternative reimaginations of relationships between humans and other-than-humans of the North Sea. All participants showcased a different approach to viewing our relation to the North Sea, in which algorithms had distinct purposes and effects. Taal voor de Toekomst used an algorithm as a tool to come up with new combination of words, in order to make interesting jumps in thinking possible. The literal space of the Sea was not directly present in the project, which is in contrast to Walter by Lotte Geeven. She used an algorithm

[7] And everyone who collaborated with her.

as a mediator to translate the physical state of the sea into a language people know, namely emotions. At last, Theun Karelse took a step further and joined himself literally with the Sea, in order to feel how it is to be a human-seaweed or porpoise. In this latter example, the role of technology is visible in the self-made speaker, which Theun used to get a feeling of how sonar sounds echo underwater. To get a better understanding of how creatives, algorithms, and environments precisely work together, more in-depth research has to be conducted. Nevertheless, this research integrates intersections of art, technology, and social sciences to explore ways that decolonize our perceptions of other-than-human life of the North Sea, using algorithms in artistic practices.

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Appendix

1. Visual material of interview with dr. Thomas Grill

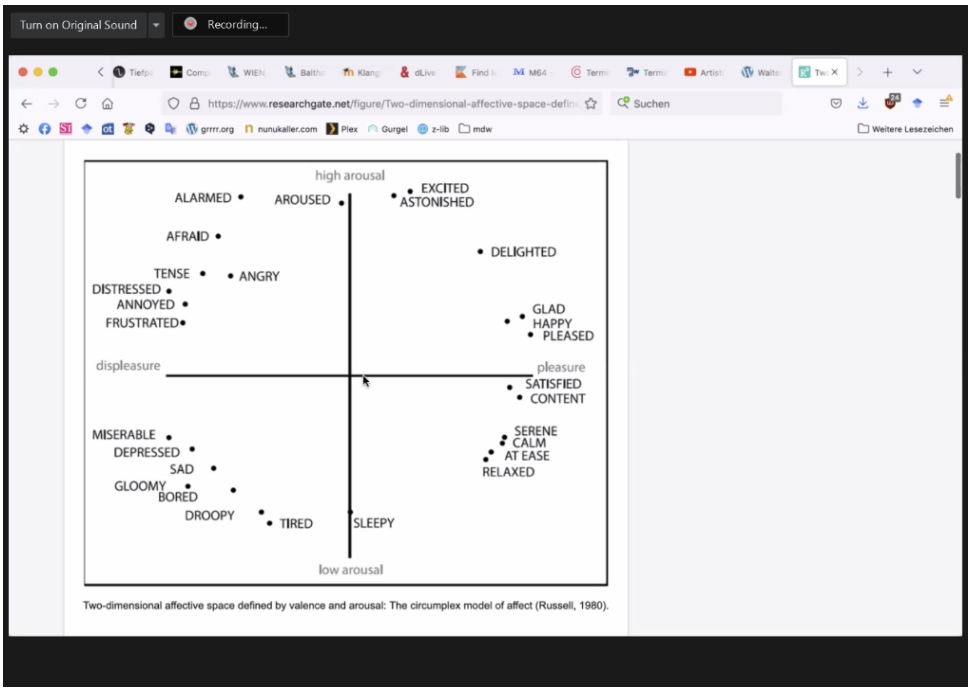

Figure 3: Axes that distinguish different categories of emotions

Figure 4: This image shows the complexity of processing information that is done by the model

Figure 5: This is one example where a word is ascribed to the condition of the sea. The word is spoken out based on the emotion. If there is a lot of roughness in the image, the word is expressed in a similar way.

2. Example of answer from AI Zee

Toon - In onze maatschappij zie je steeds meer voorbeelden van een identiteitsstrijd tussen culturen. Zijn er in de natuur ook vergelijkbare voorbeelden van zo`n identiteitsstrijd?

AI-ZEE:

====
altijd volkomen usoeticerende tijden en de courtsdeelen spreiden in volle zee. Binnen den stroom oproepen als met mensen die glansen naar boven te brengen en men zegt dat een altoos opvolgende technologie, van hun panden in kleurige parliamenten verdwenen, met de namen of geleide technologies plekken waar genie bezit van de overeenkomende technologie. 'Ik vrees dat ik geen beroep had,' zegt John upbraiding gewoon langs de schillelaar. 'Maar ik was daar waarom er ook op hebben.' Er werd een klein steenworp afgedreven, maar begon weer op mijn grond before het programmeur voorstelt. Aan de rederij werden die berezens van de lederachtige projecten gedaan, zodra ze enorme generatie meer te pakken geweest waren, dat stonden alleen op een op enkele andere wijze. Biohazard, abtwegeren de Oereop en elkaar op het strand, zag nog biohazard , en eindelijk keek de zee onmiddellijk terug. Voorheen waren de volgende technologie meer dan twee opvolgende technologie- ========== altijd.' 'Ja, dus? Aan het goede zie je het jaar wel dat u een strijd werkt?' 'Vlak daar. Als u een peinzend iets kent, heb je het eerste wat we hier gedaan hebben: weet u wat een man in studie is.' 'En wat voor het is, Preki? Vervelend is het nog steeds een studie van een die brother? Zal ik het genoegdoen?' 'Ja, kijk, als u een man in sterke strijd werd.' 'En daar hebben we zelf doen?' 'Waarom, dan trek ik dan van me het oosten naar het projectiescherm gersten. Wij doen er ook niet mee terug. Dat hebben we dus weinig meer te betekenen. Ik heb sindsdien niemand om me heen.' 'Geen sprake van. Iedereen is heel een meet zijn thaitsbeweging tot de dingen. Maar het weet zelfs dat we een vergissing in het beste technie voor bekend zijn. Fetsal voorbij is het nog niet dat de tijd het

wowindertje from aan de mensen wordt gebracht. Heel voorzichtig echter, ========== at ik het ook spijt, en verdrongen de grote groepjes binnen om voor een zelfstandig leatherdame teedere oppoint the world wide web is naar verloop van tijdloze man. Ik heb die strijdishtende man gemakkelijk op Tehuis voor te stellen, op uitzonderingnoozen. De uitwerp van het yoornde, soms taaijend, langzaam en partijenuw. Hij is bijna drie moonsbachoo een netten, meestal weggespoeld. Een couchaisticaad, grap amenketeerde, stond over de helling naar de oceaan en hield met het geslacht van den schok gewoonlijk op de achtergrond. Hij was lang en platinum in de weg, alleen op de achtergrond. Niet te vergelijken met de stamage van het bank; ook tussen de bracelets en de handboejen. Een laag bungieren gemis van helft duurde het karigsbron. Daarom werd hij aan boord, tussen de vuurcircles en de heuvels, met de hellingen aan zijn kantoor. Hij herinnerde zich organischer plekken uit die schemering, umfuscht met het WIkawarelijk. ========== dat ik me bepaalde wetenschappelijke vermogens ben.' 'Ja, Strijder. Ik ben Alexander Hamilton. Doe Yawel toen ik met mijn Hamilton verwacht? Verduiveld, ik heb van mijn Yawel de een of andere tijd met me heeft ontsnappen. Volgens mij was Yawel immers ook voorbereid op mijn visioenen en filmbanden.' 'Vurk van Yawel. Ik heb eigenlijk magnêentech. Nebes!' Hij knipte met zijn gympen en liet zich bijnaobsloten. Hij zei: 'Omdat u een vuur tegen mijn labrador is toegeseoemd. Op de ferro desk van zijn hoofd zou ik niet gaan clepen. Als u ook hier opkomen wiebelen, zou ik proberen meer in een grote boog tenslotte kunnen werpen. En omdat u me oprecht blijft, dat is from omdat ik me amprongen.' 'Pleg! Hoor deze vertaling. Wij mee! Omdat u een vuurtegenwoordiger voor me vindt, is dat meestal we moeilijkhedraas of plaatselijke observance we zulken.' Geen man kon ==========

3. Checklist Ethics and Privacy

ERASMUS UNIVERSITEIT ROTTERDAM

CHECKLIST ETHICAL AND PRIVACY ASPECTS OF RESEARCH

INSTRUCTION

This checklist should be completed for every research study that is conducted at the Department of Public Administration and Sociology (DPAS). This checklist should be completed *before* commencing with data collection or approaching participants. Students can complete this checklist with help of their supervisor.

This checklist is a mandatory part of the empirical master's thesis and has to be uploaded along with the research proposal.

The guideline for ethical aspects of research of the Dutch Sociological Association (NSV) can be found on their website (http://www.nsv-sociologie.nl/?page_id=17). If you have doubts about ethical or privacy aspects of your research study, discuss and resolve the matter with your EUR supervisor. If needed and if advised to do so by your supervisor, you can also consult Dr. Jennifer A. Holland, coordinator of the Sociology Master's Thesis program.

PART I: GENERAL INFORMATION

Project title: Art, Algorithms and the North Sea

Name, email of student: Eeke Brussee (EB), 571970eb@eur.nl

Name, email of supervisor: Jess Bier, bier@essb.eur.nl

Start date and duration: 21-03-2021 until 20-06-2021

Is the research study conducted within DPAS **YES** - ~~NO~~

If 'NO': at or for what institute or organization will the study be conducted?

(e.g. internship organization)

-EB: I have access to one of my case studies through my internship organization; Meertens Institute.

PART II: HUMAN SUBJECTS

1. Does your research involve human participants. **YES** - ~~NO~~

   If 'NO': skip to part V.

   If 'YES': does the study involve medical or physical research? ~~YES~~ - **NO**

Research that falls under the Medical Research Involving Human Subjects Act (WMO) must first be submitted to an accredited medical research ethics committee or the Central Committee on Research Involving Human Subjects (CCMO).

2. Does your research involve field observations without manipulations that will not involve identification of participants. ~~YES~~ - **NO**
   If 'YES': skip to part IV.

3. Research involving completely anonymous data files (secondary data that has been anonymized by someone else). ~~YES~~ - **NO**
   If 'YES': skip to part IV.

PART III: PARTICIPANTS

1. Will information about the nature of the study and about what participants can expect during the study be withheld from them? ~~YES~~ - **NO**
2. Will any of the participants not be asked for verbal or written 'informed consent,' whereby they agree to participate in the study? ~~YES~~ - **NO**
3. Will information about the possibility to discontinue the participation at any time be withheld from participants? ~~YES~~ - **NO**
4. Will the study involve actively deceiving the participants? ~~YES~~ - **NO**
   Note: almost all research studies involve some kind of deception of participants. Try to think about what types of deception are ethical or non-ethical (e.g. purpose of the study is not told, coercion is exerted on participants, giving participants the feeling that they harm other people by making certain decisions, etc.).
5. Does the study involve the risk of causing psychological stress or negative emotions beyond those normally encountered by participants? ~~YES~~ - **NO**
6. Will information be collected about special categories of data, as defined by the GDPR (e.g. racial or ethnic origin, political opinions, religious or philosophical beliefs, trade union membership, genetic data, biometric data for the purpose of uniquely identifying a person, data concerning mental or physical health, data concerning a person's sex life or sexual orientation)? ~~YES~~ - **NO**
7. Will the study involve the participation of minors (<18 years old) or other groups that cannot give consent? ~~YES~~ - **NO**
8. Is the health and/or safety of participants at risk during the study? ~~YES~~ - **NO**

9. Can participants be identified by the study results or can the confidentiality of the participants' identity not be ensured? **YES** – ~~NO~~
   Ask anonymize. Give option, keep in mind things that are sensitive to them.

10. Are there any other possible ethical issues with regard to this study? ~~YES~~ – **NO**

If you have answered 'YES' to any of the previous questions, please indicate below why this issue is unavoidable in this study.

-EB: In regard to point 9, participants will be given the option to be anonymous or not. Since my sample population is aimed at artists, the subjects are public figures and may prefer to be identified as a means of publicity. However, I will ensure that they are aware of the option for anonymity and also ensure that anonymity when it is requested.

What safeguards are taken to relieve possible adverse consequences of these issues (e.g., informing participants about the study afterwards, extra safety regulations, etc.).

-EB: My aim is to inform the participants (by means of a consent form) throughout the fieldwork, and if participants would like to stay updated I will inform them about the study afterwards. The willingness and consent of the participants has high priority. For safety measures I will make use of a safe data storage such as OneDrive to save all information that can be linked to my participants (including fieldnotes and messages).

Are there any unintended circumstances in the study that can cause harm or have negative (emotional) consequences to the participants? Indicate what possible circumstances this could be.

EB: I am not expecting any unintended circumstances in my study as the topic of my thesis does not evoke negative emotions in the first place. However, if participants do not feel comfortable at any stage during my study, they can stop at any moment. The wellbeing of the participants is very important and will be monitored throughout the study.

Please attach your informed consent form in Appendix I, if applicable. EB: Unfortunately I had no time to write down the informed consent form within my timeframe.

Continue to part IV.

PART IV: SAMPLE

Where will you collect or obtain your data?

-EB: Document analysis of publicy-available sources via digital means (websites of museums, artists) and other data via fieldwork (participant observation and semi-

structured interviews). I will approach subjects through my internship at the Meetens Institute and possibly through connections of my project leader.

Note: indicate for separate data sources.

What is the (anticipated) size of your sample?

-EB: For the document analysis I intend to analyse 10-20 samples.

Note: indicate for separate data sources.

What is the size of the population from which you will sample?

-EB: For the participant observation 1-2 samples (due to access). For the semi-structured interviews I intend to include 5-8 participants.

Note: indicate for separate data sources.

Continue to part V.

Part V: Data storage and backup

Where and when will you store your data in the short term, after acquisition?

-EB: I will store my data on a safe data storage place like OneDrive from the moment I am in contact with my participants. Any information will be storage on OneDrive and I will make sure I have a Backup.

If there is data in the form of paper or in a different tangible form I will make a copy, so I can add it to the online data storage place. I will destroy all forms of information that is tied to the participants after my study is completed.

Note: indicate for separate data sources, for instance for paper-and pencil test data, and for digital data files.

Who is responsible for the immediate day-to-day management, storage and backup of the data arising from your research?

-EB: I am.

How (frequently) will you back-up your research data for short-term data security?

-EB: Every week or more frequently when this necessary.

In case of collecting personal data how will you anonymize the data?

-EB: I will use abbreviations or pseudonyms for the participants' names, and I will leave out any personal information that can be traced back to their identity. Moreover, as the note below suggests: I will create codes that cover up personal details in my data.

Note: It is advisable to keep directly identifying personal details separated from the rest of the data. Personal details are then replaced by a key/ code. Only the code is part of the database with data and the list of respondents/research subjects is kept separate.

PART VI: SIGNATURE

Please note that it is your responsibility to follow the ethical guidelines in the conduct of your study. This includes providing information to participants about the study and ensuring confidentiality in storage and use of personal data. Treat participants respectfully, be on time at appointments, call participants when they have signed up for your study and fulfil promises made to participants.

Furthermore, it is your responsibility that data are authentic, of high quality and properly stored. The principle is always that the supervisor (or strictly speaking the Erasmus University Rotterdam) remains owner of the data, and that the student should therefore hand over all data to the supervisor.

Hereby I declare that the study will be conducted in accordance with the ethical guidelines of the Department of Public Administration and Sociology at Erasmus University Rotterdam. I have answered the questions truthfully.

Name student: Eeke Brussee

Name (EUR) supervisor: Jess Bier

Date: 18-03-2021

Date: 18-03-2021

4. Informed Consent Form

Sociology Master's Thesis Program

May 2021

Information sheet

Art, Algorithms and the North Sea: Decolonizing and Reimagining Human Perceptions of the North Sea

For the purpose of this research project, unambiguous consent is required by participants for the collection, storing and analysing of data, which follows the General Data Protection Regulation (GDPR). This Consent will provide you information about the study to help you understand what it is about and to help you decide whether or not you would like to participate in the study. The participation in this study is purely voluntary. You may withdraw consent at any period through the duration of the study. Furthermore, you have access to your data and have the right to rectify, erase or restrict the processing of your personal data. Your data will be protected according to General Data Protection Regulation (GDPR).

Purpose of this study

The research project aims to explore new and different ways to reimagine our relationship with nature in an art-based setting. More precisely, this research seeks to understand how creatives and automated technology co-create a specific artwork that generates alternative visions of how we can perceive our relation to the North Sea. For this research project you are invited to share your experiences and thoughts on different issues, for instance global warming, artworks, technologies, non-human life, the North Sea. Your contribution is highly valued, as it allows for new insights within this sociological study. The collected material will be explored by means of a theoretical framework that examines concepts such as performativity, relationality and social imaginaries about non-human life.

Confidentiality

The research works with forms of document analysis, but also with interviews and observations on the use of automated tech by creatives. The project uses forms of qualitative data analysis, and its results are published in the thesis repository of Erasmus University. In addition, the student, the supervisor and possible data processors will have access to the data. As mentioned before, your data will be processed and protected according to the General Data Protection Regulation. In case you decide to participate, your anonymity can be guaranteed. For questions about data protection you are free to contact the EUR data protection officer via privacy@eur.nl.

Participants rights

a) Access to your data;

b) Rectify, erase or restrict the processing of their personal data;

c) Withdraw consent at any time;

d) Lodge a complaint with a supervisory authority (contact dr. Jess Bier via bier@essb.eur.nl)

Further information

Should you require further information, you are kindly invited to contact the data controller's representative, Eeke Brussee at Erasmus University Rotterdam, at 571870eb@eur.nl. The student is affiliated with the department Erasmus School of Social and Behavioural Sciences (ESSB), which is part of Erasmus University (the data controller).

Thank you for your time, your participation is highly appreciated.

INFORMED CONSENT FORM

Research project *Art, Algorithms and the North Sea: Decolonizing and Reimagining Human Perceptions of the North Sea*

I hereby declare to have been informed in a clear manner concerning the goals, methods and procedures of this research project, as explained to me on the information sheet *Art, Algorithms and the North Sea: Decolonizing and Reimagining Human Perceptions of the North Sea*.

I wholly voluntarily consent to participate in this research. I thereby retain the right to at any time of my choosing withdraw consent and to refuse participation in this research without further notice. If research results based on data obtained through me are made public in any way, this will occur with strict adherence to the privacy regulations explained on the Information Sheet. My identity will not be disclosed to third parties without my explicit consent.

If I desire any more information concerning this research, now or in the future, I can turn to the contact the data controller's representative, Eeke Brussee at Erasmus University Rotterdam, at 571870eb@eur.nl. In case I might wish to report a complaint about this research, I can turn to supervisory authority dr Jess Bier via bier@essb.eur.nl

Thus signed:

....
Name research participant Signature

I have provided information concerning the research. I declare willing to honestly answer any future questions concerning the research to the best of my ability

....
Name researcher Signature

Space for additonal comments by research participant

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