



AGNÈS VILLETTE IN CONVERSATION WITH JANA WINDEREN

Creating a sonic archive of Nordic expeditions, forgotten landscapes, and disappearing ecosystems, Norwegian artist Jana Winderen is collecting samples to use in her musical compositions, which capture the genius loci of territories on the planet. She also creates sound installations in galleries and site-specific locations, such as the Park Avenue tunnel in New York or an upcoming project in a decommissioned Soviet gas plant in Moscow. Her work is released by the experimental audiovisual label Touch.

Winderen has visited damaged ecosystems in extreme conditions – the North Pole being one such example, as well as fragile ecosystems like the dying coral reefs in the Caribbean. Equipped with hydrophones, she records underwater sounds and ultrasounds that are more sensitive than the perception range of a human ear. Beside harvesting mysterious samples, she is also capturing the state of ecosystems confronted by the anthropocene’s human impact. Her work, making use of a whole spectrum of natural tonality ranging from mammals to insects to nature sounds, is often conducted along scientists’ exploratory trips, and engages a passionate dialogue with science on current environment issues. It is also a distinct voice within the cacophony of alerts, alarms, and doomsday discourses on the state of the planet. Winderen’s work requires one single thing from the listener, though it might seem like a very challenging one: time and attention. What unravels for our ears is rather striking: shifting ice blocks, melodies of underwater insects, bats echolocating, a rat’s love song, or dying reefs broken by waves. All of Winderen’s compositions are comprised of voices; they call for our understanding and attention.

AGNÈS When you mentioned your trip to the North Pole to do some field recordings, I remember you recalling a story that seemed very interesting beyond its anecdotal nature – when you were close to the North Pole, you heard people cheering as you were doing sample recordings?

JANA In 2015, I went to the North Pole to get some understanding of sea ice. To make sense of something, whether it is a temperature or a sound, it is important for me to go to these places and to experience them. So, I was invited by Frederik Paulsen from the Mamont Foundation. We travelled north to Russia’s Camp Barneo by plane from Longyearbyen on Svalbard. *The Ice Edge* is one of my ongoing projects based on listening to pack ice around the North Pole and in the marginal ice zone. I want to communicate the nature of the ice to an audience – more specifically, sounds of ice drifting and the life under and above the ice’s surface.

One day, around Barneo, I set out from the camp. Because of the danger of polar bears, you can never be on your own, so I went with this armed guy. And we walked and walked. You sort of imagine that the North Pole is a quiet place, but it’s not. Even from far away, we could hear the camp generator’s sounds. Sound travels further than we can see. Under the ice, sounds travel almost five times faster through water. There were cracks in the ice, so I could just push my boot through it to lower my two hydrophones underneath the surface. I could lower them down to 15 meters to record. Under there was a thousand more meters of water. The sea ice can go from a few centimeters to six meters thick. Within seconds it can rip open, and this can happen anytime. I was really hoping to get that sound, though all I could hear was the generators by the camp, even if I could no longer see them. Later that day, at the geographical North Pole point, it was some cheers from the faraway team celebrating with champagne that I could hear through my microphones. Not even there, so far from the camp, was it possible to record without human presence. I would have had to be skiing there alone!

Many artists today are working along scientists; in your case, you have accompanied scientists' projects to the North Pole and the Barents Sea to do field recordings. In a way, it is a bit like being embedded in scientific expeditions. Can you speak about those trips and the discoveries you made?



More recently, I was invited by Paul Wassman in spring 2016 to a field trip organized by University of Tromsø, on the ARCEX cruise. I journeyed for ten days on the research ship R/V Herman Hannson with a team of 17 scientists studying the marginal ice zones. The goal of the trip was to gather knowledge about pelagic and benthic ecosystems during Arctic spring bloom scenarios in the fjords of western Svalbard. We also went to the coastal area of Storfjorden and the western Barents Sea. I joined the project because of this project *Iskanten*, which translates as *The Ice Edge* in English, and it relates to marginal seasonal ice zones of the Barents Sea.

There are so many things happening that have not been investigated. Last May, I went to study the ecosystem, and especially the phytoplankton that produce oxygen through photosynthesis. The phytoplankton get eaten by fish, crab larvae, and other zooplankton, whose excrements contain a lot of carbon dioxide. The droppings then fall to the sea floor and get stored there. When I went this year, it was during the spring bloom, which means extreme environmental activity as the light starts to come through the water. It's the marine equivalent of what is happening on dry land during the spring. Of course, it attracts a lot of fishes in the area. The spring bloom in this area is considered to be one of the most important carbon dioxide sinks in the biosphere at this time of year. We really need to understand its importance.

Another very apparent fact during that trip was that there was not much thick sea ice and large ice flows at a time when they should have been there. Standing on the boat deck, it was striking to see the darkness on the horizon. The ice is important as it reflects back the light. When the ice is not there, the energy gets absorbed by the dark sea surface, nothing gets reflected back out into the atmosphere, and the globe heats up.



Your work is connected with several environmental issues, which is a highly political topic.

Measurements that were taken last May in similar environments are very important to knowing more about the ecosystem's possible reaction to potential oil-drilling activity, for example. Politically, in Norway, it is a big issue. The prime minister has recently said that the sea's ice edge is moving by itself, that it is not humanly created, which is such a stupid assumption. The area I went to, in the Barents Sea, is along the sea border line between Russia and Norway. This area had been a grey zone until 2010, when Jens Stoltenberg – the Norwegian prime minister at the time – and Russian Prime Minister Dmitrij Medvedev made an agreement of where the border should be. Recently, during the 23rd offshore licensing round, politicians allowed for the opening of new oil fields in this area. There is no general information about what is happening in that zone unless you look carefully, so I wanted to go and investigate around the Northeast Passage – both with the oil drilling activity and the Passage's possible opening (because the sea ice is retracting, the shipping passage is opening and allowing new traffic between Asia and Europe). How would this new route interfere with the ecology? It is a very fragile environment. This is the area where cods, among other fish, have their most important feeding zone. Cods are here from their larval stage up to four years before migrating to the Norwegian coast to spawn. They are fish that use sound, they listen with their whole bodies – their swim bladders, lateral lines, bone structure. I believe they are orientating themselves according to pressure, salinity and temperature. Belugas have been known to develop brain hemorrhage when diving too fast to escape human created sound. They also can't hear each other through the human-created sounds and fail to meet up with others to mate. It has generally been noticed that sea mammals will stay away from areas where they normally feed because of human-created shipping noise, and starved because of it. So, besides the possibility of oil spills, it is easy to understand the stakes of these constant sounds of shipping traffic right through some of the most important feeding grounds for fish and sea mammals.

Even though you are sampling and collecting sound data, your field recordings do not have a scientific value. What distinguishes the samples you are collecting from those of the scientists?

For my data to be considered scientific, it would need to be carried out in the scientific method, over a specific period of time, at exactly the same spot, with a selection of choices regarding a specific field to study. But there are a lot of similarities in what I do and what the scientists do: they study very different aspects of the biosphere, and are concerned with all the creatures of the sea bed, from top to bottom. But one scientist needs to specialize in, say for example, copepods, and someone else will be expert on phytoplankton in ice. For example, when I ask a question like, "What will happen if the CO₂ levels increase in this area?", it is impossible to come up with one answer. You need to be able to see all the factors influencing each other, and there are uncertain factors – it is very complex. I believe at this time we need to combine all different perspectives, from within and without the scientific fields; we all need to collaborate to try to get close to an understanding.

You've also had a marine project on coral reefs. Doubtless it is a different environment, but were you able to identify common globalized problems?

The reef project is called *Silencing of the reefs*. For three years, as part of Thyssen Bornemisza Art Contemporary Academy, I was an artist in residence on the vessel Dardanella. I am concerned with the health of reefs, corals in particular. So far I have been on the Mesoamerican Barrier Reef listening to fishes, crustaceans and mammals, and trying to understand the issues at stake in these environments. During the 80s a bacterial infection called the white band disease killed large amounts of corals in this area. Biodiversity was not great and without a large genetic variety, more than 95% of the coral died. This meant that algae took over the reefs. There is also a lot of illegal fishing going on, which kills all the parrotfish living from eating the reefs' algae. New coral larvae need to anchor themselves on older coral reefs to start growing, which also allows the reef structure to grow. When old coral reefs do not get new additions, they slowly start breaking (it is dead material). With more open oceans, large waves get even bigger. In consequence, these coastal areas get much rougher seas reaching the mangrove coastline. The mangroves, which are important nurseries for fish, also suffer. Both coral and mangrove are protecting not only the living and breeding grounds for fish and fish larvae. They also are comfortable areas for whales to give birth, as the waters are warm and shallow, and the swells are more gentle because of the reefs. Finally, reef destruction is also affecting human settlements along the coast. It has become obvious that when CO₂ levels are rising, the ocean's acidification increases, which is devastating for coral. We now know that for reef fishes, the water acidification makes them less responsive to sound and other sensory impressions, so they get less scared and swim right into the mouth of their predators.

What do artists bring to the field that distinguishes them from scientists – in their research, or approach, or even their way of thinking?

An artist can have an overarching apprehension, maybe thinking in directions scientists might not touch on. One might ask very direct questions that no one has thought about before, or adopt a different angle. When I was up North, I was very aware of how we were arriving in this environment with such an enormous boat, into a very fragile area. We sort of roamed in with this monster. The method seems brutal somehow. But the scientists are very aware of this, and are thinking about how to make the sampling process less intrusive to the environment. I was with a scientist at the time I was recording bearded seals; we could not see them, but when I lowered the hydrophone in the water, I could hear them. The scientists had drones taken out there, which is a more gentle way to count animals. But to listen in a proper way with high-quality recording is another way to approach the subject. Often one might miss elements that can be only captured by sounds. Scientists know that seals make sounds, but they would take a different approach, visually analyzing the sampled sounds on a spectrogram. Just listening and using one's ear is different than seeing it on a screen.

Your work requires gathering very specialized knowledge. Would you say that the distinction between art and science is getting more blurred?

I would. I do a lot of reading, mainly science books, and have a background in fish ecology, chemistry and biochemistry. But I never studied biology, for example. Before that May trip, I ordered a book on oceanic biology. I wanted to read about plankton and how they are drifting around the planet. But it was only when I got back home that the subject had become so clear, after being with scientists for ten days talking constantly about those issues. The scientists are really interested to have artists with them, and how we can spread the word. Though I don't know how much our presence can change their practice. But sometimes, it feeds back to them as well. I met someone working with sea mammals, and played back to him some recordings I had done of bearded seals. And he got really interested about the dimension of sound, and how it could gather a lot of knowledge. By communicating with sounds, I have the feeling that all the ecological issues become more intense for an audience than if it was done through other media, such as image reproduction or photography. Again – for me, to bring back those sounds in order to create sound compositions is a way to suggest respect, concern and curiosity from the public.



Image by Jana Winderen

In a way you take a step further, as the field recordings become part of sound pieces that are played back to an audience in a concert. It seems like such a disjunct: from the North Pole to a concert hall in a European capital.

By doing so – and it might sound a bit strange – I hope to suggest we could be more humble and respectful of other creatures. I want to enhance an ability to listen and experience the world outside of our senses. The sounds I gather can be outside of our perception or within audible range, but often outside the reach of what is apprehensible for us, such as underwater sounds. We have limitations. We lost something somewhere in terms of not listening properly to what lies outside of our immediate perceptions. It is hard to believe that people are not listening. I was recently asked if I was aestheticizing scientific data. This is a relevant question, but is it really what I am doing? When people come to my concerts, it's not my point to bang their heads to agree with me. They are not the people whose minds I need to change. That would be to go into the political systematic approach. I am trying to give a good listening to the audience. I want it to be an experience you can sink into and rest inside, as you go inside of a listening experience.

I studied phenomenology and the writing of Merleau-Ponty when I was at Goldsmiths, and it probably influenced my thinking and my work. Though since university, my approach has been very much empirical: I go out there to experience the world and I do my findings that way. I also often make drawings of the fish and creatures I am thinking I will meet. So when I go to a new place, I have already familiarized myself with some of these animals. Of course I read about the environment I am going to, and once I am there, I speak with local people and scientists about local issues. I sometimes suggest hypotheses, and ask the biologists if they make sense; even if they would be impossible to prove, I think it is interesting to suggest them to make both myself and the audience think about what is at stake.

The audience is not one big homogenous group. For example, today I was running a workshop with a group of young adults who have hardly been around art. A very different audience to one where people would buy a ticket to hear me do a multichannel concert. Or it could be an 11-year-old kid I meet by the river and gets to put my headphones on. Another audience could be radio listeners; I have no idea who they are when they listen to stuff on the radio, or when they buy releases on my label, Touch. Though I hope that some, a few, might get inspired to start asking questions themselves, start to listen with more focus. They might, through concentrated and focused listening, discover smaller more fragile connections, creatures and environments. It needs to become common knowledge (and I am very happy this is more the case nowadays) that fish and crustaceans also communicate, call for mates, and orient themselves with sound, and even if we know that different species of sea mammals are 'singing', we still know very little about them.

We need to slow down and listen, carefully.

AGNÈS VILLETTE IS A FRENCH JOURNALIST AND PHOTOGRAPHER BASED IN LONDON. HER LATEST PHOTOGRAPHIC PROJECTS ARE INSPIRED BY HER ENCOUNTER WITH ECOLOGY CONCEPTS.