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With regards to the physical architecture of cables that will be laid on the Arctic Ocean floor, it is good to mention submarine cables and gas pipes are actually not that harmful to ocean life. They only disturb the seabed habitat temporarily during construction, but provide a solid substrate for a variety of species in the long term. This 'reef' effect creates new habitats and attracts non-local fauna. A marine biologist from Murmansk told me that the Red King Crab and the Snow Crab are originally not from the Barents Sea. As an invasive species they came here on ships from other places. If we, like financial investors, consider the Arctic Ocean floor as a new frontier in our imagination it's easy to see these crabs co-existing with other invasive species like a trading algorithm that goes by the name 'Sniper' and colony of robotic arms planting national flags. Global warming isn't bad news for everyone.

This text is part of the ongoing work *The All Infrared Line*, which researches the historical and contemporary construction and geography of the telecommunications infrastructure that serves as the backbone of today's financial markets. This part of the research and this text were commissioned by *Dark Ecology*.

It Ta_{ke}s a Lot_{to} Ar_{ti}cu_{la}te an Obj_{ect}

Interview with Noortje Marres
Arie Altena

Olivia Langhamer, 'Artificial Reef Effect in Relation to Offshore Renewable Energy Conversion: State of the Art', in *The Scientific World Journal*, (2012), Article ID 386713, http://dx.doi.org/10.1100/2012/386713

As a sociologist Noortie Marres is concerned with the role of objects, technologies and environments in social and public life, and especially in the enactment of participation and social change. Her work is part of a shift in our thinking, which is informed by an awareness of environmental problems like global warming, and pays more attention to nonhuman entities. seeking to understand their contribution to politics and sociality.

Arie Altena The theme and title of our book and festival is The Geologic Imagination. Among other things it focuses on events that occur on timescales that are so large that theu elude our perceptions. We're interested in this expansion of the dimension of time. The theme obviously connects to the idea that we live in a new geological age, the Anthropocene. It also resonates with manu ideas that are tossed around by philosophers and theorists associated with Object-Oriented Ontology and Speculative Realism. On the one hand at Sonic Acts we are very interested in the attempt by object-oriented philosophers to rethink ontologu, and think outside the human perspective. But sometimes I get the impression that it leads to 'stories' - fascinating stories certainly - that relish in the horror of a totally nonhuman approach. Compared to the history of planet Earth, we're totally insignificant.

Noortie Marres One way to clarify a problem is bu telling a storu. Such stories are likely to involve simplifications, but I would like to start with the story of the feminists of the 1970s and 1980s. Theu formulated quite compelling critiques of a science that so often locates its object of fascination in the far away. There is a deep-rooted presumption that to go on an adventure of knowledge requires turning away from ordinary settings and displacing one relf to exotic timer and roacer: the astronomical constellations of cosmology, the extreme environments of other planets, exotic natures and faraway tribes. The feminists of the 1970s and 1980s guestioned the implicit devaluation of what is close by, routine, habitual, and intimate. What worries me about some of today's speculative realist philosophies is their insensitivity to

what is close by, their lack of interest in practices and settings that bear the mark r of human intervention. Here we return to the notion that the truly significant, spectacular entities are huge and far away, and that everuthing we have an intimate experience with is mundane and in revaluing the everudau, the approximate and the intimate, feminists did not just dismiss that broad horizon of time and space. What they did instead is re-orient our temporal-spatial awareness. They suggested that things that seem close may contain elements of the exotic, and thinas that are very far away may turn out to be profoundly normal.

AA Could you provide an example?

NM Some especially clear examples can be found in the environmental awareness movement that has close ties with feminism. For this movement, the toxicity of everyday environments showed that industrial production made itself felt in the very fabric of our liver. It demonstrated that some of the new sunthetic components developed with the aid of science and technology had actually entered our bodies. By drawing attention to such things feminist thinkers said, 'Look, the industrial scale is not just a scale that transcends the everudau'. Many things that are associated with the big scale of industrial production, but also the scientific issue of the composition of natural substances, happen equally close by, in everyday spaces and in close intimacy with our own bodily practices. The disruption of the linear scales of ontologu is one of the important accomplishments of feminist thinkers like Donna Haraway.

AA Timothy Morton, the theorist who coined the term 'Dark Ecology', and who was with us on our first *Dark Ecology* journey in October 2014, often stresses exactly this intimacy with industrial pollution and the mundane aspects of it. He connects this to a 100 per cent object-oriented approach...

NM There are lots of people today who are figuring this out, and much of their work is very interesting. Another example is Nigel Clark who work can the history of the furnace - on a geological scale. He writes about the ways in which different forms of co-habitation became possible when fire was encased in the furnace, and was brought into communities, villages and other human habitats. The taming of fire is a fundamental event that seems very far removed from our post-industrial ways of life. But Clark places ways of living, ways of doing - cooking, heating - at the centre of his account. He shows that the relations between humans and environments and world dynamics become clear in those very practices. The material practices of everyday life are sites where we continuously enter into relations with entities and practices that have very long trajectories through space and time.

AA Characteristic of your position is that you are quite close to object-oriented theorists in your insistence on the participation of things in social life, yet, in contrast to them, you mostly write about concrete social and political situations.

NM Insofar as object-oriented metaphysics is tied to a rejection of social theory and social perspectives on knowledge and politics, it does often result in a discrimination against the mundane and the

everyday. In a sense, I lean the opposite way, as I extend concepts that are used to understand human practice to nonhumans. For example, I've argued that everything needs to be 'equipped' in order to make itself felt. For anuthing to have effects or to express its existence, it needs to be equipped. This obviously applies to humans. Humans need shelter, we use tools. But I think it also applies to a very great extent to nonhuman entities. How can the ocean make itself felt, or how can the air aet its due, how can the bees in South London, where there are far too manu given the limited green space. speak out? The auestion of how theu are equipped is absolutely crucial with regard to how they can assert and possibly express themselves in relation to some problem. If we want to broaden the awareness and appreciation of environments, nature. nonhuman entities, and objects we have to appreciate their need to be equipped and gain the capacity to affect others, I'm pro-equipment of things.

AA Can you explain your use of the concept 'equipment'?

NM For me equipment is not just about technology. I think there are two things to explain. One is that I use a really broad notion of equipment. Heideager has used the word equipment - Gestell - in relation to the roles of objects. I give a much more positive spin to it. Equipment is the extent to which things can serve as instruments for other things. or can sustain them. It can be a garden where bees are staged as natural beings that matter. A garden can be equipment for the air. Filters can be equipment if it means that certain toxic elements stay inside a machine. Equipment is about the reliance of entities on other entities

in order to assert their existence. The other point is that there is a tendency to think about equipment as technology, and therefore as a way of specifying human culture. Humans use hammers, therefore the use of tools characterises human culture. It's not wrong to treat technology in that way. But it's just one of many approaches.

AA How does this connect to art and to environmental issues?

NM Some environmental artists have a very powerful grasp of these possibilities. Take for instance the work Nuage Vert by the artist duo HeHe (Helen Evans & Heiko Hansen), in which they project laser light onto the smoke emitted bu a power plant. To bring to life the particular environment in which the plant is situated, they use the emission cloud as equipment. By introducing this artistic intervention in a setting, theu enable this environment to capture people's attention. In the Parisian version of Nuage Vert there were ongoing controversies about the role of the power plant in the local community. By projecting laser light onto the emission cloud. the work drew attention to the plant, thereby participating in the articulation of the problem of the power plant in that setting. These problems were discussed in community meetings (including the problem of environmental health), and journalists started taking an interest. As an artistic intervention. Nuage Vert brought to life issues in that environment, it enabled the articulation of the setting. The neighbourhood agined expressive capacities, and this facilitated different kinds of engagement.



HeHe - Helen Evans & Heiko Hansen, Nuage Vert, Saint-Ouen, 2009.

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HeHe, Nuage Vert, Ivru-sur-Seine, 2010.



HeHe, Nuage Vert, design sketch, Helsinki, 2008.

AA There's one passage in your essay on Nuage Vert that struck me. Maybe it's simply because it relates to what we've been doing with the Dark Ecology project. You write that in the Parisian version of Nuage Vert, it became clear to people living in the shadow of the plant that industry and nature are not disconnected. Usually in political controversies, industry and nature are played out as opposites: industry is polluting; nature should be pristine.

NM To undo pre-established thought patterns takes a lot of work. The idea that sustainable technology comes after industrial regimes of living, and therefore that to believe in sustainable technology, we also need to believe that industrialisation has come to an end, is a firmly entrenched set of assumptions. The investment in post-industrialism is also connected to the idea that fossil fuels and their extraction are at the heart of the pollution problem. It's really important to realise that these kinds of conceptual schemes are deeply ingrained. It's not as if a philosopher can say, 'Oh, actually, the opposition between nature and industry is a problematic conceptual scheme; let's get rid of it.' At the same time, it's extremely important to question these assumptions. This is where artistic interventions and maube intellectual work can contribute. In the case of Nuage Vert, the artistic intervention suggested 'factories are here to stau', i.e., the health implications of the factories in our midst are likely to continue to be a problem. In this instance, this also meant: we need to move on from a one-dimensional fantasy of sustainability - whether in the form of the recycling bin or the allotment aarden plot - to one that requires us to ignore or bracket the factory for this fantasy to seem viable.

To be able to make this critique is very important. In this case, it was achieved through an artistic intervention.

AA But it's very difficult to present these critiques in the news, or in activism...

NM Of course, in many ways fossil fuels are our principal problem and accordingly it is the ideals of the fossil fuel lobby that we need to challenge. In that respect, saying 'the factory is here to stau' is like shooting ourselves in the foot, Besides, in manu situations, it's also a silly observation. But if you want to operate environmentally and do justice to the complexity of environmental issues, it may become very important to recognise that the factory is here to stay. The accomplishment of this artistic intervention is then profoundly contextual. The possibility of articulating the critical point reallu depends on that particular setting, that particular neighbourhood...

AA Is that why you have a reservation about the capacity of intellectual work to make these kinds of articulations?

NM I feel that rometimes philosophers aren't good environmentalists. If you say 'it's contextual, it depends on the setting', you could come across as shrinking the frame, and reducing everything to a small scale. It may seem that you're not ambitious enough as a philosopher in establishing a broad spatial and temporal frame. But I think you can address the deep-seated assumptions and express the broader, more long-term problematic issues precisely by being hyper-contextual.

AA That relates somehow to my experience of visiting Nikel in

northern Russia, one of the most polluted places in Europe. An enormous nickel smelter looms over the town. The earth is scorched. The air tastes of sulphur. But one is impressed not just by the 'sublimity' of this industrial landscape and the pollution, but also by the mundanity and the human face of the place. Nikel is full of young children, there are playgrounds everywhere between the flats. So when you go there, it immediately becomes a very complex place. Also, that factory isn't going anywhere.

NM In many respects, the practice of living in such an environment expresses what is at issue more sharply and more convincingly than a general account with statistics that wants us to see the broader picture. By mentioning kids playing in playgrounds you already manage to invoke something of the enormity of what's at stake there.

AA Timothy Morton rejects the idea of an environment. Instead he urges us to think of the world as a set of objects where 'object' by the way is not just an object in the classical sense - instead, everything is an object. (To the extent that what others would call a network or a phenomenon, is conceived of as an object). Morton also comes up with the idea of 'hyperobjects'. I don't want to go into the whole ontological discussion, but I wonder how you look at that criticism of the concept of environment.

NM Because we all come from different backgrounds, these words take on a different relevance. For me words like 'environment' and 'setting' are important for a number of reasons. I'll mention two. What I really like about environment and setting ir that they are composed

of many different entities, in ways that we don't fully grasp. In that sense environments and settings are open-ended. We don't know where the environment ends. It could extend really far. It implies that we don't really know who or what participates in what is happening in a certain setting. That's the main reason why I'm an environmentalist, I guess, or continue to want to be one. In that sense, I'm not an objectoriented thinker. I think it takes a lot to articulate an object. For the most part things are in an underarticulated or entangled state. But it's not just humans who do the work of articulation: it's also events. The twentieth century cured us of the idea that we can author ontology, that ontologies have a singular author, and I think we should hang on to that. It's important that we continually recognize and remind ourselves that events, happenings, and environments participate in articulating what makes up the world.

AA And what is the other reason?

NM Another reason why I care about setting and environment is connected to the history of the social sciences and social methods. Society has classically been taken to be something that exists above and beyond the particular contexts and settings in which life unfolds. Social methods have therefore been designed to enable the disembedding of social phenomena from their settings and environments. When you conduct a survey, the idea is that answers should not be informed but he setting - like the temperature in the room. In sociology, political science, economics, and to an extent also in psuchologu, a citizen tends to be imagined as a disembedded

character. A citizen is supposed to form opinions on the basis of evidence or reasoning, and not be influenced by the particularities of the setting. I think the ecologically minded should prioritise addressing this discrimination toward settings and investigate how we can make allowances for settings to be participants in the making of issues, opinions or decisions. It's a very tricky thing that we're talking about here. Because, of course, I don't want mu house to decide for me how I should feel. And I'm not saying that we should stop being critical about projects of environmental conditioning. I think we need to be very critical of those kinds of interventions, but at the same time we should stop discriminating against environments, and envision more constructive ways for material settings to participate in the doing of awareness and in the articulation of what are rightly called environmental problems.