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Pinngortitaq – A Place of Becoming

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Cover Page Footnote

We thank the two anonymous reviewers for the critique and insights they provided. We wish to thank the Danish Ministry of Higher Education and Science, and Ivalo and Minik Fonden for supporting the work as well UIT for supporting Mrs. Lennert's research stay in Norway. Especially we wish to thank the hunters and locals for their comments, engagement and knowledge contributions. The second author was funded through the Arctic ABC project (Norwegian Research Council project nr. 244319. This work is a contribution to the Arctic Science Partnership (ASP) asp-net.org.

CRIB NOTES

Pinngortitaq – A Place of Becoming



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ABSTRACT

Arctic ecosystems are on the verge of changes that are unprecedented in both magnitude and velocity. We stress that statements of a changing climate and environment have ambiguous definitions in both theoretical and metaphorical senses. Inuit have embraced the idea described by Nuttall as an environment in a process of Pinngortitaq – a place of becoming rather than a place of changing. In this Crib Note, we accentuate how a philosophy of a world becoming can inspire to answer some of the complex environmental questions asked today by enabling more flexible management regimes in the future.

INTRODUCTION

The world's attention today is aimed toward the Arctic and global warming. The polar bear (*Ursus maritimus*) floating on a small remain of an iceberg and the Inuit struggling across the Arctic to preserve important aspects of their traditional life have become iconic images of the ongoing changes (Figure 1). It is no secret that the climate for many places is changing at a pace not previously experienced in modern times (Duarte et al. 2012; Ruddiman 2013). At the same time, the Earth's history tells numerous examples of past changes and variations with dramatic results. Some prime examples are the mass extinction of dinosaurs, the post-glacial mammalian mega-fauna, the Norse decolonizing Arctic Greenland (Devine et al. 2011; Koch Madsen 2014; Xoplaki 2011), and the recent 1930 warming event causing large changes within trophic levels and species composition across the Arctic (Drinkwater 2006; Jensen 1939; Lennert and Bjørk 2017; Wisz et al. 2015).



FIGURE 1. Karl standing at the closed down settlement of Kangeq, thinking back of the days when hunting beluga whales (*Delphinapterus leucas*) and sharing his knowledge and perceptions (Photo: Ann E. Lennert).

We claim that, despite the general conception of a changing planet, the contemporary and local environment and biota too often is regarded as stable or as having a natural baseline. The world's bestselling single of all time, Crosby's "White Christmas", is a good and visual example: "I'm dreaming of a White Christmas. Just like the ones I used to know." In

other words, it refers to an assumed stable state of winters and how they really should be, irrespectively of the fact that it stems from a period in time during which global temperatures were low, compared to most other post-glacial periods (Lejenäs et al. 1989). So, in the light of these accounts of climate abnormalities, how can we use them to strengthen managements of Arctic environments in the future?

Our planet has been in a constant state of change, but how do we conceive and act upon both natural and human impacts on the world's biota and environments in our time? If Arctic animals have always fluctuated in abundance and in regions inhabited (Fauchald et al. 2017, Aporta 2010), how can management, on small regional scales, measure up against these environments where the fish and wildlife resources typically are large, fluctuating, and migrating? Are conservation and environmental management designed to conserve anachronisms rather than a natural dynamic environment and biota? Can we learn from the Inuit that have been able to live sustainably due to their adaptation to large, unpredictable, seasonal, fluctuating resources?

METHOD FOR BUILDING THE CONCEPT

The knowledge held by people who have been closely and directly involved with their surrounding environments is a valuable tool to understand environmental variations (Barlindhaug & Corbett 2014; Collignon 2006; Cruikshank 1990; Gunn 1994; Ingold 2007; Lennert 2017; Lennert and Mikkelsen 2015). We hereby present knowledge gathered from the project "A Millennium of Changing Environments - Bridging Cultures of Knowledge" (Lennert 2017), together with travels and conversations with locals and hunters, using participant observations and informal interviews, revealing their lived experiences. It was these lived experiences that introduced us to the notion of *pinngortitaq*.

CASE STUDY OF PINNGORTITAQ – A PLACE OF BECOMING

Statements of changing weather and environment can have multiple definitions in terms of their theoretical and metaphorical sense. Cultural frames influence the way people perceive, understand, experience, relate to and respond to not only the social world but also the physical world around them: the environment. This has also been the characteristic of the Inuit in Greenland, both in the past and today, where many people consider the environment as being in a process of Pinngortitaq – a place of *becoming* rather than changing (Nuttall 2009); a world of memory, anticipation and action (Nuttall 2012); a world of ever-evolving environment.

"When the beluga whales disappeared from Kangeq, we just caught seals instead," Marius, old hunter from Kangeq.

Marius apprehends the shifting nature of the environment, believing that pinngortitaq is a process of the world around him coming into existence through his engagement with it. Although pinngortitaq is often simply translated from Greenlandic as nature or creation, its literal meaning is to come to being. Pinngorpoq is a process of becoming, to come into existence, referring to the unfolding of possibility and opportunity (Nuttall 2009:302-303). The experience of growing up in an environment undergoing processes of becoming informs hunters and fishers that, in addition to good equipment and skill, knowledge about movement, behaviour and habits of animals is vital to their successful capture. Furthermore, they live by the notion that the world is one of constant surprise and the environment is one of motion (Nuttall 1992, 2009).

"Because of the warmer climate, the sea has become warmer, and like earlier there has come a lot more fish, like the mackerel, which is good," Angunnguaq, old hunter from Kapisillit.

“My family, who are fishermen trawling for shrimps, moved up north because the shrimp have moved up north. It is just something one does,” Per, from Tasiilaq.

Here it becomes obvious that changes are a notion of becoming. Variations that are a natural asset of life; a life course one does not question but follow.

“The Minky whales have disappeared off the west coast of Greenland because of the growing abundance of killer whales. Now we just hunt the killer whales instead to be able to sustain our own household economy and for subsistence,” hunter from Tasiilaq (Figure 2).

While some cultures long for the “White Christmases they used to know” and countries establish national parks to preserve or bring back nature to its natural



FIGURE 2. Now that the minke whale (*Balaenoptera ac utorostrata*) has disappeared, the local hunter now hunt orcas (*Orcinus orca*) instead (Photo: Frede Kilme).

state, Inuit have embraced “the becoming world”, i.e., the environmental variations, by moving and using knowledge and skills shared through traditions. Skills that are connected to a more comprehensive understanding of life – in which variations of the weather, the animals, the winds, the sea, the land, and the ice all are part of the same learning experience (Aporta 2010) – generate a learning culture of experience that could be indispensable for the western world in the future.

“We have always adapted. Environments have always changed, and we still adapt. This is just our way of life,” Marius, a young hunter from Nanortalik.

Marking Marius’s words, it is no secret that the long-term occupation of Greenland has only been possible because of the Inuit adaptations to climate and environmental variations and change, moving around and seeing new opportunities. Moreover, all cultures are adaptable to some degree; some cultures following nature’s flow, other retarding it or hurrying it. For cultures in the Arctic, mobility and flexibility play a crucial role, such as for animal diversity related to environmental variations, or for the repertoire of captured information (Gunn 1994).

A BECOMING WORLD OF DICHOTOMIES

Humans have spent decades trying to preserve wild species from direct threats like habitat destruction, overhunting and pollution. Humans have protected species by creating parks and reserves for animals to safeguard them in their native ecosystem. The U.S. Department of the Interior proposed designating more than 320,000 km² of land, sea and ice along the northern coast of Alaska for the polar bear, which is losing critical habitat due to global warming (Broder 2009; Minter and Collins 2010). Ecologists and conservationists are considering relocating threatened species to new locations before their historical ranges become inhospitable due to climate change (e.g., Hoegh-Guldberg et al. 2008; McLachlan et al. 2007; Minter & Collins 2010; Richardson et

al. 2009). However, as Chapple (1994) writes; in ecosystems, change is as natural as it is inevitable. Hence trying to preserve in perpetuity—trying to “freeze frame”—the ecological *status quo ante* is as unnatural as it is impossible. This is not to excuse the vagaries of pollution and climate change that humans have brought upon the world. However, a more sophisticated and refined concept of wilderness and preservation among contemporary conservationists would better support the integrity of evolutionary and ecological processes, instead of preserving existing natural structures.

Historically, there is a tendency of modern cultures being above nature. In Deuteronomy, the Fifth Book of Moses, it is conjointly written:

“And when the Lord hath delivered them to thee, see that ye do unto them according unto all the commandments which I have commanded you (5 Mos 31:5) When all Israel is come to appear before the Lord thy God, in the place which he hath chosen: see that thou read his law before all Israel in their ears (5 Mos 31:11) For it is not a vain word unto you: but it is your life, and throw this word ye shall prolong your days in the land whither ye go over Jordan to conquer it (5 Mos 32:47)”

We have conquered, polluted and controlled. Now the question is: What happens when the state or system - rather than a natural dynamic environment and biota - conserved by the western world meets the Inuit philosophy of pinngortitaq?

“Now we don't catch the seals out by the islands because of the ice being unpredictable. Instead, we catch the hooded seals that one before did not prefer to catch. This change is just a natural evolvement of life,” Marius, young hunter from Nanortalik

How can these innovative perceptions of ever-dynamic environments be an inspiration to and help towards a more flexible management of resources, which both regionally and globally is of utmost importance? Communities have accomplished to have a sustainable harvest and equitable distribution

of resources built on local flexible management. One of the reasons for their success is that they have seen themselves as part of the ecosystem (Lennert and Mikkelsen 2015). Often, today's management suggestions are based on preservation paradigms, which unfortunately eliminate everything except passive human interactions or visitations in the ecosystem, which may have fatal consequences.

“Before, we could collect the eggs from the Arctic terns, this was an important supplement to our diet, but because of the ban on doing this, set by the government to protect the birds, we cannot do it any longer. The funny thing, though, is that the number of arctic terns has declined in the colonies despite the band. It is because the seagulls now take the chicks when the eggs hatch. A bird cannot lay a new egg when its egg has hatched. When we collected eggs, the birds would lay a new egg, and we would push the hatching of eggs to when the seagulls were in their own colonies with chicks, therefore more arctic terns would survive,” Appollo, hunter from Saattut.

A similar incident was seen in Glacier Bay, Alaska, where the Huna Kaawu or Huna tribe were banned from harvesting eggs. Later, studies showed that not only was the harvest clearly misunderstood, it documented the Huna people's gull (*Larus glaucescens*) egg gathering techniques as being biologically astute and ecologically sound, actually perpetuating healthy gull populations (Hunn 2003; Monteith 2007). The latter study concluded that the techniques used by the Huna people to harvest gull eggs utilized an approach that based on a solid understanding of nesting habits and egg production. The Huna people had developed a traditional ecological knowledge and had developed a sustainable method of harvesting gull-eggs (Monteith 2007:75). This significance of anthropogenic processes on species population dynamics—and how these can inform food security today—are also attested through sustainable and customary harvest of seabirds in New Zealand, the titi (*Puffinus griseus*), by Rakiura Maori (Moller et al. 2009a, 2009b) or the multi-species clam gardens in British Columbia, Canada (Goesbeck et al. 2014).

Historical accounts also give a picture on how humans have affected ecosystems. Before humans hunted down the large bowhead whales (*Balaena mysticetus*) almost to extinction by the end of the nineteenth century around Svalbard and Greenland, Arctic seas were strongly influenced by these large predators. Their main prey was the zooplankton calanoid copepods, long considered the key species of polar marine ecosystems. Here, the herbivorous *Calanus spp.* were particularly abundant, displaying a range of adaptations to their highly seasonal environments.

However, the history of whales can also be a history of evolution, the predation pressure of the now nearly extinct baleen whale might actually have been a driving force in the evolution of life history traits of the Arctic *Calanus* (Berge et al. 2012). Additionally, following the near-extinction of the baleen whales due to the extensive whale hunt, seabirds, such as, the little Auks (*Alle alle*) (Figure 3) suddenly soared in numbers because of more readily available food sources. Such shifts in abundance and dominance of species represent a major challenge for management regimes aimed at preserving a certain state, taxon or community.



FIGURE 3. The little Auk (*Alle alle*) of Greenland and Svalbard soared in numbers as the baleen whales were extensively hunted. Today their numbers are dropping, likewise the number of baleen whales is increasing (Photo: Ann Eileen Lennert).

Local observations of the environments being a process of Pinngortitaq is also displayed by Bekres (2000), Nadsady (1999), Elwood (2009:59) and Danielsen (2016) emphasis upon the value of traditional ecological knowledge and the locals' perceptions and relations to their environments

(Ingold 2011), knowing that they include multi-species management, resource rotation, succession management and other ways of responding to and managing pulses and ecological surprises.

“After our hunting and fishing trips, we often discuss between us what we have seen. Some species are disappearing. Some species are coming back after having been away for a long time. And some species are turning up in larger numbers than before,” Lars, hunter from Akunnaaq (As of February 1, 2017, www.pisuna.org)

Even though they seem inherently incompatible, it is important to bridge the two worldviews, (i.e., the preservationist vs. subsistence dichotomies) to meet, at least, at a middle ground. Emphasizing on this, it is possible to shape management regimes where knowledge has been shared to display the importance of a common understanding of natural resources as well as recognition of the Inuit's holistic view of life, perceptions of environments, and the knowledge they hold. To understand the different aspects of climate change and its effect on the environment and living beings, it is important both to know how the global climate changes in general as well as to perceive it as a world of pinngortitaq, because: What is the actual baseline or the natural state of an environment? Why is conservation and environmental management designed to perceive nature as static rather than a natural dynamic environment and biota? And how can we keep up with the changes happening when we often accentuate on a stagnant management?

GETTING BEYOND THE PRESERVATION DICHOTOMY

A more holistic view of our surrounding environment and biota can help answer complex environmental questions, enabling a more flexible and dynamic management approach. Pinngortitaq could serve as an inspiration to be at the forefront of changes and as an insinuation that nature never has or has had a natural state but always has been on a constant move. It should be an inspiration to scientists across fields.

Indigenous and local observations and perceptions warrant serious attention. In combination, the increased need for data, promotion of locally relevant knowledge, and management actions suggest that there are substantial prospects for more local engagement around the Arctic in the decades to come, and that more local engagement will contribute to more effective local management actions. Fishers (Figure 4), hunters and other communities relying on natural resources are already using their own observations, as are environmentally interested people, thereby obtaining small-scale and regional management regimes following the variations of nature. Furthermore, it is important also to recognize the anthropogenic impacts of the becoming of the world, i.e., how humans induce top-down forcing onto ecosystems, how they impact on shifts of abundance of species or even serve as a driving force in evolution of life history, as we are part of these ecosystems.

“Well, I’m really like one of them, you see. I grew up with them, they know me, and I know them. I’m part of nature here. I’m just one link in the chain. You see, the midges eat the algae, the trout eats the midge, and



FIGURE 4. Local hunters always observe and discuss what they see when hunting (in this case ringed seal, *Pusa hispida*, around the settlement of Ilulissat). Collectively they shape the frames of a flexible management and ways of responding to and managing pulses and ecological surprises (Photo: Fernando Ugarte).

I eat the trout. And therefore I am just one link of the ecosystem and belong to nature here. I’m just one part of it,” Finnbogi Stefánsson.

Acknowledging and being inspired by the perceptions and holistic approaches presented is not only a matter of data and observations for natural scientists. It is as much a matter of a process of community engagement, education, and transmission of knowledge as well as being an effective tool in enabling communities to achieve voice in municipal, national, and corporate decision-making (Nordic Council of Ministers 2015). Including holistic views and perceptions of a becoming world into frames of management of resources may just as well help make natural resource management rules and regulations locally relevant, flexible, and applicable. Scientists and indigenous peoples have called for more research that not only theorizes how to integrate local and traditional knowledge but also actually emphasizes upon its practice (Elwood 2009; Lennert 2017; Nadasdy 1999).

So, the first step is to bridge the two worldviews of the preservationist and the subsistence dichotomies. The second step is to perceive our environment as a natural dynamic evolution with anthropogenic footprints and forces of nature. The third step is to acknowledge that management also involves an understanding of people and their role in the ecosystems.

As Niels Bohr expressed, “prediction is very difficult, especially about the future.” Thus, it becomes increasingly important to evaluate our view of the changing world around us. As the complex environmental questions transcend disciplinary boundaries and involve multiple spatial scales, it is critical to search inspiration by looking at Pinngortitaq. Pinngortitaq might provide valuable insight in order for us to relate to it through the holistic process of becoming, to come into existence, referring to the unfolding of possibility and opportunity, thereby taking advantage of this philosophy of life and environments.

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