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Special Issue

Tracing the Arctic; Arctic Traces

ABSTRACT Nowhere on earth is global warming happening as fast today as in the northernmost region. In many cases the situation is acute for both humans and other animals. But it is not only biotopes, but also long-since intertwined systems of nature and culture that are in accelerating processes of change. What was once portrayed as almost invincible is now associated with vulnerability. The situation is one of urgency for the four million people living in Arctic areas, but it may ultimately affect many more. The northernmost area on earth once again reminds us that humanity too has a limit. This introduction starts with a fieldwork note from contemporary Greenland, where the contested colonial heritage also exemplifies the entanglement and friction of global interests and environmental change. In this broadly multidisciplinary collection of scholarly articles the Arctic will be discussed both as nature and as culture, and in ways that stress change and complexity. Unexpected alliances and tentacular methods are crucial in our challenging times, according to environmentalist Donna Haraway. The contributions of this journal issue also share the context of support for a co-curated exhibition at the Nordiska museet on "The Arctic—While the Ice Is Melting" (from 2019).

KEYWORDS multidisciplinary collaboration, Arctic, climate change, collections, tentacular methodology, traces, Nordiska museet, co-curation, geo-cultural, colonial heritage

Tracing the Arctic. The Weaving of a Multidisciplinary Web

The atmosphere in Nuuk was marked by the presence in the harbour of a luxury cruiser.[1] Already at the airport I had run into mineralogists and other scientists from different parts of Europe, and now a Russian icebreaker had also cleared the way for a large group of well-off tourists. Some of the visitors ventured to bathe in the cold water while others tried out a kind of hang-gliding in pairs, and could be seen hovering in the high, clear air. They seemed to be moving in a fantasy landscape of adventure and play. Perhaps the small pieces of iceberg floating under them were a part of the attraction.

Ebb and flow meet in the old colonial harbour, traces of change and continuity. The racks at the boat club, filled with kayaks in different colours of plastic, are a reminder of how an invention with Arctic roots going back a thousand years has continued to evolve and spread around the world. A wooden church and some other houses from the eighteenth and nineteenth centuries are traces of the reverse movement—of outside influence.

Standing on a high hill is a statue of the Danish-Norwegian missionary Hans Egede, in his clerical dress with its characteristic ruff. At the foot of the base there is a reference to a Danish bronze foundry. A similar monument to "the Apostle of Greenland" stands in front of the Marble Church in Copenhagen.[2] The copy in Nuuk was erected in 1922, probably to mark the fact that two centuries had passed since the missionary's ship cast anchor in the early 1720s, further out in the fiord. Egede had been entrusted with the task of making the inhabitants of Greenland aware of the Reformation and of the new claims of the Danish crown. The Norsemen who had settled in southern Greenland around the year 1000 were the intended recipients of the message, but by then they had died out or left Greenland. There are various theories about the cause, including the deterioration of the climate at the beginning of the Little Ice Age (Charpentier Ljungqvist 2017: 274–275). However, there were other people in the area, the Inuit who lived by hunting, and after seven years the parish and the colony of Godthaab was established (Thuesen, Gulløv, Seiding & Toft 2017: 46–67).

Monuments are among the societal technologies intended to give lasting recognition to certain selected people and events (for example Latour 1998; Frykman & Ehn 2007). Paradoxically, the medium also brings the possibility of iconoclasm and other ways of communicating critically about—and with—what was once given materiality and the status of cultural heritage (Latour 2002: 14–37). Egede's statue in Nuuk is regularly the subject of tributes but it has also been repeatedly vandalized (Duran Duus 2012; Kruse 2015). When I visited the harbour in August 2016 the statue was adorned with a wreath while the base was sprayed with graffiti. Four years later the ambivalence even brought about a referendum.[3] And although a majority of voters were in favour of the monument's lingering presence digitalization keeps taking things one step further. On the Internet, images of Egede live on, covered with graffiti and paint, and they can be spread even after the traces on the actual statue have been erased.

The spiritual and moral dominance of the Protestant missionary is also challenged by an alternative monument. Rising from the water, just below the church and the hill where the missionary stands, is Sassumap Arnaa (in other contexts called The Mother of the Sea, Ímap Ukûa or in American Inuit tradition Sedna), in the form of a red granite statue that the municipality had erected in 2007 on a stone base just at the high tide limit.[4] As in the myth, she is surrounded by the seal, the walrus, and the other animals of which she is the keeper and ruler (af Klintberg 1986: 21–25). A man is standing by this supernatural being, combing her long hair. According to the myth, a shaman has to mediate when the mighty mother of the sea has become so angry at the bad behaviour of humans that she keeps the animals of the sea in the depths (Rasmussen 1921: 5, ill. 84–85).[5] Through the attraction exerted by the moon, the movements of the tide repeat the back-and-forth action of the myth. At high tide the figures disappear. At ebb tide they reappear, and the shaman has at least temporarily managed to assuage Sassumap Arnaa's wrath. Tangles of filth, caused by humans, have been combed away and again the animals can become prey and food for them.

It is thus only at times that Hans Egede reigns alone on his hill, at once sullied and revered, a residue of the order of the colonial power and its system of values. Yet it would

be an oversimplification to interpret conflicts over the cultural heritage solely in relation to what is Danish. There was also criticism that the statue of Sassumap Arnaa was made of red Swedish granite; a foreign material was considered inappropriate to illustrate the power and the return of the Inuit tradition (Søgaard 2011).

Fig. 1. The colonial harbour in Nuuk in 2016. Photo: Lotten Gustafsson Reinius

Fig. 2. "Mother of the Sea" at low tide. Photo: Liv Arnesen.

In a long chronological perspective, the dialogue between the two statues is even more pointed. The ice sheet covering Greenland is the second largest on earth and is among the oldest ice on earth. If it were to melt in its entirety, the sea water, according to some estimates, could rise by six metres. Even now, some parts of the earth are drastically affected by rising sea levels. Can anything prevent us from moving towards a future when Sassumap Arnaa will no longer rise above the surface of the water? To put it in mythical terms, it will not be possible to appease her anymore. The ultimate moral of the tale is left to the elements and the future. In that light, the fact that Egede will remain in sight somewhat longer seems ironic but less relevant. If both these figures are swallowed up by the sea, the systems and relations they represented will also be but remnants of the human species that ought to have struggled more to deal with the damage it has caused.

The Limits of Humanity

In the circumpolar area in the far north, the land masses of America and Eurasia (and hence three continents) border on a frozen inland sea. In the Arctic, we also encounter the human species at its northernmost limits. Of course, no one has been able to settle as far north as the geographical North Pole, but people have been able to reach the edge of the ice somewhat further south. In the arctic mountain world and on the tundra along the rivers, there are places full of life where humans as well have found ways to survive through striking forms of adaptation to a harsh climate.

Whereas Antarctica, at the planet's other frozen pole, has remained unpopulated except for research expeditions and other occasional visits, the Arctic has since ancient times also comprised cultural landscapes and human lands. Greenland was populated

relatively late, 4,500 years ago, and has also been completely uninhabited for periods. The influx of people to Iceland happened so late that there is a written history of the island's first inhabitants. But human diffusion has had several front lines, and they have moved, with known settlements 8,000–12,000 years old in Siberia, Canada, and Scandinavia. Research on these matters is in a phase of such rapid development, not only technical but also climatic, that the picture should be seen as a progress report.

At many places in the Arctic, new archaeological finds are being turned up almost daily as a result of the melting of the ice. In the mountain world, traces of very early hunting of wild reindeer have been found. In Siberia some people now earn a living collecting and selling mammoth bones, extracted from the thawing tundra, a prohibited trophy but one that is in great demand. Some argue that bones which rise to the surface should be left in peace, even by archaeologists. In an area on the Yamal peninsula, the indigenous people interpret them as confirmation that some animals have moved their migration paths further down, into the underground which is safe from hunters (Anderson, Milek & Harrault 2017).

Local knowledge of which mountains and which valleys should be avoided suggests that people in the Arctic have shared experiences of living side by side with things that should be left in peace. The experience of living on an edge, close to challenging landscapes and to life forms and beings that are beyond the human, is also expressed in memoirs and legends. The agriculturally useless lava fields in Iceland are still sometimes described as the home of "the hidden people," who only occasionally pass through the human world. The view of the polar area as a world beyond what is humanly possible has played a different role in the imagination of the outside world.

In polar travellers' narratives, the compass needle trembles as it points towards the north, not only towards the Pole Star, but unmistakably in the direction of what is seen as nature and challenge, danger and allure beyond and outside their known world. During the so-called pioneering era of European and American polar expeditions, the rhetoric was characterized by nationalist and masculine-coded heroism. The attractiveness of that kind of challenge sometimes seems to have been so extraordinary that it was described as morbid, and one could speak of young men afflicted by "Arctic fever." Walter Wellman argued in 1898 that the only cure was to "put them on ice." Travelogues from early expeditions to Greenland are also discussed in the article by Kirsten Hastrup.

Fig. 3. "Kornerup on the Ice." Oil painting by J.E.C. Rasmussen from around 1890. Collections of Nuuk Art Museum. Photo: Tomasz Wacko, Nuuk Art Museum.

While male explorers of the Arctic were depicted as engaging in battles with the elements (and with rival expeditions from elsewhere), the women in the stories of the time emerge either as other distant objects of their longing or as clairvoyant mediums, with a supernatural ability to suffer vicariously the plight of the men in danger (McCorristine 2016: 149–164). The connection to spirituality is still found in contemporary writers, as when Annie Dillard (2015: 16) locates her meditative longing for an absent god at what she calls "the pole of relative inaccessibility:" the imagined point in the Arctic Ocean which is furthest away from land in all directions. From late nineteenth-century artists' polar depictions, where scientists are portrayed as small and vulnerable on the edge of bottomless channels in the ice, to Bea Uusma's (2013: 19) journey in the footsteps of Andrée's balloon expedition, we sense the same call of the sublime—and the same obsessive will to know:

> I have to try to follow them. I have to get inside their pockets. I have to get behind the words in their crumbling diaries. I have to understand what happens to a human being who is in the middle of the pack ice, unable to get away. I have to get into the ice, under the frozen snow. I have to get to the place where they died. I have to get to White Island.[6]

When she finally did get there, Uusma suddenly realized that she was at a latitude equivalent to something "underneath the round plastic disc at the top, the one you have to unscrew to change the light bulb:" an area sometimes considered too peripheral even to map (Uusma 2013: 102).

Although the Arctic today is relocated at the centre of global attention and concern, it is still difficult to pin down. Where is the start and finish of an area that (unlike Antarctica at the South Pole) does not count as a separate continent? There is no established and generally recognized southern border. Although the Arctic Circle has often filled this function, researchers in different sciences have instead seized on observable and more fluctuating factors. Meteorologists refer to average temperatures of ten degrees in July and botanists to the tree line, while linguists and cultural scholars are interested in phenomena that accompany people and are therefore more difficult to demarcate.

Anyone who is on the road between Luleå and Jokkmokk can, thanks to the Swedish Road Administration, take an extra turn with the car on a small road where you pass the Arctic Circle. But despite this kind of confirmatory pirouette, borders today are becoming increasingly blurred. As a result of global warming, the tree line has in some places moved over a hundred metres higher up. At the same time, the word Arctic is used as an epithet—a marker of interest, a brand, an identity—in more and more contexts far south of the Arctic Circle. Sweden is a member of the Arctic Council along with seven other states and organizations representing a much larger number of indigenous peoples from the circumpolar region. As discussed by Annika E. Nilsson in her article the growing number of observers illustrate that more and more countries have interests in the Arctic Ocean.

The tenacious dream of the Arctic as a destination for individual entrepreneurs from the south has also, at least since the growing markets and the whaling industry of the seventeenth century, been an operational part of the northern expansion of the nation states. The way the Arctic has been regarded as an accessible resource landscape, not only for groups that have slowly developed ways of living there but also for more industrial large-scale projects, is treated in depth by the historian Dag Avango in his contribution to this themed issue. In light of this, the heroic stories of expeditions to frozen expanses also appear as brushstrokes when the Arctic is painted as "almost uninhabited" and a

terra incognita to be explored and conquered (cf. Jonsson 2010: 106–109). One can see present-day parallels in the former US President Donald Trump's proposal to buy (!) Greenland from Denmark. Also when local activism the other year helped to stop the international company Beowulf Mining from starting operations in Sápmi, both the threat of exploitation and resistance to it stand out as recognizable focal points in a postcolonial situation that is becoming increasingly global.

While the far north today is understood by new players and in new ways, the image persists of the Arctic as an ultimate limit. Arctic fever is flaring up again but mixed with the cultural diagnosis of our time: the growing climate anxiety. Nowhere on earth is global warming happening as fast today as in the northernmost region; melting ice and thawing permafrost appear to be rising barometer needles indicating the threatening state of the world.[7] In many cases the situation is acute for both humans and other animals. But it is not only biotopes, but also long-since intertwined systems of nature and culture that are in accelerating processes of change. What was once portrayed as almost invincible is now associated with vulnerability. The situation is one of urgency for the four million people living in Arctic areas, but it may ultimately affect many more. The northernmost area on earth once again reminds us that humanity too has a limit.

The Tentacular Museum

The great challenge of our time, as the influential ecocritical thinker and theorist of science Donna Haraway (2016: 3–4) puts it, is "to stay with the trouble," to dare to take in the scale and problems of climate change without giving up or indulging in excessive optimism about the potential of technology. In this situation, she advocates more unconventional cooperation in the creation of knowledge and in the presentation of the problem. Both theories and stories are needed, and this also requires a new openness for unexpected alliances. One of Haraway's (2016: 2) examples is the relationship between scientific research and the bold speculation that characterizes science fiction. But what other border-crossing cooperation can pave the way for insights and work on shared problems? Can awareness of the fundamental uncertainties of our time make us more inclined to accept differences in the way knowledge is generated?

In places other than Nuuk public expressions are also created as comments on the effects of climate change. In Iceland in August 2019, the country's president attached a plaque at the Ok volcano in memory of Okjökull, the first Icelandic glacier to be pronounced dead due to global warming: "This monument is to acknowledge that we know what is happening and what needs to be done. Only you know if we did it." The new memorials are emerging in a borderland between art, activism, and storytelling and, like the old myths, they span very long distances in time and space. These are poetic and political responses to a crisis that is at once geologically, culturally and existentially mindboggling.

Some examples of new forms of collaboration on climate research can be found closer at hand, in the northern Swedish mountains. The lands where the young Linnaeus thought he saw "God himself on his back"—and where humans and animals have created paths for thousands of years—are among the areas where global warming is known to be happening so fast that the consequences are already staring us in the face. The geographers at the Tarfala research station, Stockholm University, where glaciers have been measured and studied since the 1940s, are working today both with artists such as Hanna Ljungh and with the local and hard-pressed reindeer herding of the nearby Sami village of Laevas. Like eighteenth-century naturalists, today's botanists collect observations with the help of mountain hikers. For example, there is citizens' research on shifts in the

cycles of mountain flora.[8] As in the current pandemic (2020), both old and new paths are activated by a creativity and openness that seems to grow in times of crisis.

The *Anthropocene*, above all, as Sverker Sörlin (2018: 174) writes in his book with that concept as its title, reflects that we are at once irrevocably at the end of something old and at the beginning of something new: "a time when man's responsibility for creation must be formulated on a new level." The designation signals that our time is characterized by the way human activities have affected the earth's climate and ecosystems, and it has also had a major impact on artists and humanists. The environmental historian Jason W. Moore (2016) is among the critics of the term. He does not question the idea of a new era, but that the term—meaning "the age of mankind"—tars all humans with the same guilt for the consequences of historically specific power orders and economic systems. Shouldn't it rather be called the *Capitalocene*? Donna Haraway's (2016: 31–33) alternative term *Chthulucene* points instead to the need for new approaches in a new era. The name refers to something unexpected in this context, a small spider, *Pimoa cthulhu*, which lives in old stumps of California's huge sequoia tree, which it takes apart and weaves into something new. With its eight legs, it can work in several directions at the same time and connect what was previously unconnected in a web of thin but strong threads. That Haraway takes an animal as a teacher is not a coincidence; it underlines that mankind should drop the claim to stand above other species. We are not alone in trying to deal with the earth's accelerating problems.

When interpreted literally, the *tentacular* image may feel alien, but it captures important aspects of the methodology of unconventional cooperation. The word *tentacle*, Haraway (2016: 31) reminds us, comes from the Latin *tentaculum*, deriving from a verb with the double meaning of 'to try' and 'to feel.' As a methodological model for a project that integrates multidisciplinary research with the museum's exhibition work and documentation from different places and projects, which are in turn characterized by local collaboration, the image is inspiring. The tentacular spinning creates threads in different directions which are connected in a web that can span borders and cracks.

This themed issue forms a vital node in the large web of voices, collections and perspectives woven to secure a multidisciplinary knowledge base for a major exhibition on life and climate change in the Arctic which opened at Nordiska museet in Stockholm in October 2019. "The Arctic—While the Ice Is Melting" was preceded by several years of boundary-crossing work. It was an early choice not to dwell on well-known polar expeditions in the exhibition, but instead to highlight the Arctic as home for the four million people who today live and work there. Well aware that this initiative was also taken outside the Arctic, we hoped to include other voices and perspectives from both present and past.

The five articles in this issue—all peer reviewed in collaboration with the *Journal of Northern Studies*—form the spine and base of the illustrated volume *Arktiska spår* ['Arctic traces'] (2020), which also features forty shorter contributions from scholars, artists and curators and serves as a catalogue *raisonné* for the exhibition. Like the exhibition itself, the hybrid book genre was a method for linking the academy's and the museum's work of presentation and research in a collective and border-transcending effort to expand knowledge, focusing on the changing Arctic. The collaborative process began in the autumn of 2016 and involved conversations and seminars, open lectures and film documentation in Arctic local communities and research stations. Apart from the research dialogues, which often crossed disciplinary borders in an unusual way, there were also ongoing inventories of artefacts and archival material, discussions in the reference

group, and finally the cooperation with artists, producers, and craftsmen leading to the concrete construction work in the museum's galleries. Nordiska museet was in charge of the production but more than forty scholars in both the social and natural sciences, as well as other kinds of experts, generously shared their research and advice throughout the curatorial process.[9]

All of the authors in this themed issue have participated with presentations at Nordiska museet, either in the series of open lectures "Arktiska spår" or in the invited Hallwyl seminar series on geo-cultural changes in the Arctic, which I led, in the role of Hallwyl Visiting Professor at Stockholm University and Nordiska museet and which ran for three terms (2017–2018) and brought invited researchers from different faculties together with interested artists and the museum's own experts in collections and archives. For the dialogue between scholarly traditions, it has been important that a museum served as a platform for conversations and presentations. Anyone who tries to make their research understood in contexts outside their own discipline is in some sense always outside their comfort zone. That has been a shared experience here, which has stimulated mutual curiosity and created new dialogues between researchers and new opportunities for communication.

Apart from program activities, lectures and articles, Dag Avango and Annika E. Nilsson have also contributed texts, constructive criticism, and expertise in the reference group. The specimens in the exhibition of older works of art and utility objects from different parts of the Arctic area are characterized by ingenuity and concern for function, resource management, and beauty. It has been a conscious decision not to show them isolated from contemporary voices and various aspects of tradition and modernity. A number of documentary films, produced by Nordiska museet and the Norwegian filmmaker Camilla Andersen, in collaboration with local communities and ongoing research projects, provide additional testimony from contemporary everyday life and work in the Arctic. The film from Nautanen, one of the many places in the Arctic where a bust has left haunting presences and abandoned traces of extensive resource extraction, was made in cooperation with Dag Avango. Kirsten Hastrup and Kyrre Kverndokk also gave inspiring open lectures at Stockholm University during their visits.

The seminars covered a wide range of topics but were united by a couple of overall questions. How can we together arrive at a better understanding of geo-cultural processes of change that also have existential dimensions? And how should we translate our own pre-understanding and go beyond it, in ways that engage more people? Here, clearly, no perspective could act as the lone "hero" on the ice. Rather than searching for shared definitions or unambiguous boundaries, a space was created for complementary understandings, scales, and knowledge goals.

On a few occasions the multidisciplinary talks were scaled up to public events, where we also showed finds which had resulted from the targeted search of the collections that was being carried out parallel to the seminars. In addition to the museum's knowledge builders, the seminars were also attended by invited authors, scientists, humanists, and other experts. As stressed by Annika E. Nilsson in her article, there is a need for more ways for researchers from different faculties to meet, but also for research and local and practical knowledge to interact more. A reindeer herder testified about daily life in transformation. A foreign correspondent supplied current impressions from Siberia.[10]

The lived experience in a local environment can be at least as real and relevant for ensuring continuity as the explanations offered by scientific models. At the same time, there is reason to dwell on the insight that local perspectives are not automatically com-

patible with each other or with understandings that encompass a global perspective. As Tim Ingold (2014: 235) has put it, the step towards humbler collaboration is to acknowledge and accept that there are cracks between different but equally valid descriptions of reality. Allowing more narratives to be heard, with no demand for unanimity, is an attempt to avoid "the danger of a single story," to borrow an expression from Chimamanda Ngozi Adichie (2009).

The research articles are all generous contributions to a joint effort to heighten public awareness of the situation in the Arctic and its complexities. In spite of the obvious distance between their disciplinary points of entry to this field, they are placed in a kind of internal dialogue, where Hastrup and Jakobsson—who both build on extensive fieldwork in the high Arctic from differing angles—expand our understanding of the dynamics of ice. Jakobsson reaches into the depth of oceans and deep time, while Hastrup details the ruptures and continuities of Inuit relations with the frozen yet fertile hunting grounds for sea mammals, historically and with an eye on the immediate and growing crises.

Both Dag Avango and Annika E. Nilsson revolve around the critical concept of resource landscape, while looking in somewhat opposite directions. Avango offers a historical understanding of the uses and perceptions of the Arctic from explorers and exploiters of the south, while Nilsson allows her survey of climate research to stretch into ideas about the future, and the factors that combined might strengthen societal resilience.

The encounters between such differing perspectives and scales as those of geology, history, social sciences, and ethnography are contextualized in the essay on climate change where Kyrre Kverndokk takes the clash between temporalities as point of departure for a meta-perspective on climate change, as it affects media and everyday understandings.

Tracks and Traces in Knowledge Production

A key argument in the edited volume *Curating the Future. Museums, Communities and Climate Change* (Newell, Robin & Wehner [eds.] 2017: 4–6) is that museums, as safe places for meetings between people and collections, have a special potential to arouse engagement by conveying both knowledge and emotions. As a counterweight to the format and publishing logic of the news media, the museum offers other scales and experiences of time. Here, according to the editors, all of whom work in the borderland between academia and museums, one can experience a global change at a rate that is human. Perhaps, they go on to say, we need slow media like this to be able at all to absorb and understand the kind of change that has also been called "slow violence," which in many other situations can be perceived as contrary to the direction and demarcation of personal experience. Objects and images are crucial elements for the museum medium. They are the paths through which stories can flow (Newell, Robin & Wehner [eds.] 2017: 2).

It has been possible to draw material from Nordiska museet's collections into the gravitational field of multidisciplinary dialogues, both in the preparatory work for the exhibition and later, as part of the presentation. A shield against snow-blindness, made of sooted glass and birch bark. A worn wooden kneepad to enable people to work longer on the ice, with long notches made by someone cutting fish or meat on it. Notes in the archive showed that the sock-knitting needles, acquired from Hestur in the Faroe Islands, were manufactured there from driftwood that had floated ashore (see Fig. 4). Recorded data and artefacts are not only contributions to the growth of knowledge resulting from the project. They have also been catalysts and trace elements for emotions. This can be anything from a story of personal experience about how to protect an infant from the

cold and wind during the migration with the reindeer, to the encounter with a small, worn, but beautifully decorated knife used for peeling bark from trees. Even through a showcase, the encounter with an everyday object can make it possible for more people to identify with and learn from previous generations' knowledge and experience. For a researcher, a subjectively affecting trace, a visual or material *punctum*, to use Roland Barthes' (2006; Gustafsson Reinius 2008: 23–44) terms, can often give powerful stimuli for further tracking.

Fig. 4. Objects from the sea and the Faroe Islands. Collections of Nordiska museet. Photo: Karolina Kristensson, NM 0094083.

Working with fragments that may seem insignificant, but which when exposed and studied in more detail reveal wider connections, is a method that many sciences have in common (cf. Ginzburg 1989). The words *trace* and *tracing* in the title of this collection of articles allude to one of the overall metaphors that enabled the tentacular work. The search for knowledge, expressions, and understanding has taken place through traces in the multiple sense of imprints, remains, trails, and concrete movements. A poem says that "the paths are wiser than we are, / and know all we wanted to know."[11] A trampled path is an imprint of past movements and a trace that conveys knowledge. It can simultaneously connect us with what has been and propel us forward in motion. The walker meets condensed experience and contributes through his or her own imprint to increase it and pass it on. Perhaps this has a particular resonance in the northern parts of the world? Trails and paths are part of the heritage of movement in the northern mountain world (Svensson, Sörlin & Wormbs 2016: 131–151), but they are also crossed by newer road networks. Many who live around and north of the Arctic Circle live in the cities or commute to them. There are nurses and miners, schoolchildren and teachers, but also hunters and reindeer herders whose language, culture, and livelihood have been shaped by millennia of participation and interaction with the ecological context of the frozen

tundra, the Arctic Ocean, and the forests. It has often been a question of following mobile resources such as reindeer, fish, or other prey. Many still live with some form of seasonal migration, but even more often follow in the wake of an essentially different kind of movement; the more or less forced migrations of people, caused by the changing territories of the nation states or by resource extraction, have become a shared and often very painful Arctic experience.

As a cultural heritage scholar with an interest in rituals and materiality, I myself proceeded in my initial example from monuments, graffiti, and wreaths as material traces of historical relationships and their renegotiation in the present. The marine geologist Martin Jakobsson reads a planetary history that is many millions of years old in the sediment at the bottom of the Arctic Sea while a historian like Dag Avango finds sources in both the written documents and the concrete imprints of things like mines and abandoned ghost towns. The flows that reveal the links between movements of the landscape and people's way of life include not only the melting of the ice but also the movements of driftwood with the ocean currents. Both, as analysed by Kirsten Hastrup, are deeply entangled in the currents of ideas and technologies that depend on a certain materiality. The interrelation of the development of the infrastructure with the expansion of tourism and industry is pointed out by Dag Avango, while Annika E. Nilsson introduces the theme of social movements in her reasoning about humans as another kind of resources.

Another productive and related picture of how knowledge is made is the idea of *archives* as media where what has been preserved for a long time can also rise to the surface and make something clear. As we have seen, the two poles have been a symbol of all that is peripheral and remote, but also of a form of stability, given by nature, and in some sense beyond history and change. It is as if frozen ice sheets at both ends of the globe have kept the world in place, both conceptually and as cooling matter. When permafrost thaws and icebergs melt, such—simplified—dichotomies of nature and culture, time, space, and different identities are also disturbed. Kyrre Kverndokk discusses in detail how the climate crisis, and not least the fact that ancient ice is melting, affects the understanding of time in research, in the media, and in everyday life.

In his book *Returns. Becoming Indigenous in the Twenty-first Century*, the anthropologist James Clifford (2013) pronounces dead the grand ethnographic narratives about the "extinction of primitive peoples." What has happened, he says, is instead that the Western world is starting to be decentred, indeed, to the point that the postcolonial self-criticism to which the cultural sciences have devoted so much energy is already outdated. In the huge number of examples of how representatives of indigenous peoples in different parts of the world are reconquering language and other kind of global and local agency today, it is tempting to mention also the artistic energy that is working with the Sami experience in Scandinavia today.

It would be liberating to be able to join in proclaiming that the theory of cultural disappearance is disproved and dead and can finally be consigned to the hall of shame for colonial rhetoric. But perhaps that would be simplistic? In the north, too, many indigenous peoples share a heavy history of colonial experiences, which have harmed language, culture, and self-determination. What is happening as a result of climate change is so culturally transformative in many places that it would be cynical not to recognize it as an acute and global problem. However, it should be done with a large portion of humility. The question of the future and history, the actual narrative of what is happening, should be neither idealized nor formulated in unequivocally negative terms.

Metaphor, Hope, and Other Crucial Methods

The museologist and historian of ideas Mattias Bäckström (2016: 10) has argued that exhibition productions can also be understood as a special form of research process. He is particularly opposed to a simplified division into the knowledge content on the one hand and the physical form in which it "communicated" on the other. What Bäckström describes as a "double-sided interlacing practice" of representational and multidisciplinary reflection is a mutual process. Because the conversations about these processes were held in a museum of cultural history—and not in a more scientific environment as might be expected—they acquired a figurative meaning. From the museum's multidisciplinary "laboratory," the tentacles extended to artefact stores, archives, and card indexes. Here too, the project initiated a form of opening that uncovered traces and layers of previous efforts to order, categorize, and draw boundaries. In this project, of course, the elements of art and design in the exhibition have also been stimulating for the reflection and interpretation. The literary scholar Rita Felski (2015: 52) comments on the recent academic upswing for metaphors, saying that they represent something that is both risky and necessary, images of ideas based on fundamentally analogue and comparative thinking. It is also useful to think with Paul Ricoeur's ([1986] 2003) classic observation that metaphors create new knowledge through a process of semantic creativity that adds an understanding of feeling and sensation. The metaphor, like the exhibition, thus also has a kind of tentacular agency.

The mutual enrichment arising from collaboration between academia and museums has to do with specialization: in the university, theories and concepts are developed in critical discussion; in the museum there are the tools to give form and space to metaphors and voices. When theoretical concepts and ideas, such as the model of connectivity between different factors that may support sustainability as discussed by Annika E. Nilsson in her article, were translated into the artful expressivity of exhibition language, the role of concrete action also materialized in new ways.

Throughout the industrialized world, albeit especially in rich parts of the northern hemisphere, we are all entangled in the problems that threaten us and future generations. We need to find a way of living with the realization that we ourselves are simultaneously threatened and part of the threat. Crises can be perceived as a form of broken contract, but also as growing rifts between societies, groups, and individuals, between species that have long been interdependent and perhaps also—when the very seasons and the foundations of existence are slowly changing—as a break in the relationship between mankind and being, mankind and God. During the so-called Little Ice Age it happened that people who had formerly believed in the pagan Norse gods, the Æsir, in despair and anger desecrated images of the gods who no longer seemed to accept their sacrifices or deliver gifts in return, in the form of summer and the returning sun (Andersson 2011). The rift that runs between generations, species, and communities is also cracking open within us. In the title of her article Nilsson builds on this image, suggesting that we perhaps should view the ruptures as openings, in that a growing awareness of crisis will force us to find solutions.

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In her article "Living (with) Ice," the anthropologist Kirsten Hastrup takes us straight into the heart of the project's overall theme—the relationship between mankind and climate in the Arctic—with an empirical focus on the northernmost known settlement on earth, the Thule region in High Arctic Greenland. The survey begins with the arrival of the first humans some 12,000 years ago and leads on to the era of European expedi-

Fig. 5. Entrance to the exhibition "The Arctic—While the Ice Is Melting," designed by Museea (with Sofia Hedman and Serge Martynov), Nordiska museet 2019. Photo: Hendrik Zeitler.

tions and Hastrup's own ethnographic fieldwork, with recurring encounters and learning situations with today's Inuit. Descendants of the ethnic group that Rasmussen called the *Thule people* very consciously call themselves *Inughuit* today and live with accelerating changes to their climate and their lives. These processes are captured in Hastrup's term *geo-sociality*, i.e. people's interaction with the ice that constitutes "a constantly moving life force" with an effect on everything in the area, from food supply to poetics.

The marine geologist Martin Jakobsson has devoted much of his research to mapping and sampling the Lomonosov Ridge, which runs across the bed of the Arctic Sea in a way that Jakobsson's scientifically led polar expeditions have helped to (re)locate. Based on the idea of the seabed sediments as a natural archive, he takes us on a research journey with veritable deep dives into time and the sea. With such a long perspective, climate, just like earth, water and ice, is revealed to be a fundamentally changing and moving phenomenon. In this volume the scientific angle—also through its clear account of the ways in which such knowledge is produced—is a vertiginous approach to the discussions of the Anthropocene and mankind that Jakobsson also touches on but which is further developed by Kyrre Kverndokk.

In his article Kverndokk, who is himself the leader of a multidisciplinary project,

"The Future is Now," on climate crisis and understandings of time, applies cultural analysis to contemporary processes of change, with a focus on how everyday life and media discourses are characterized by a growing crisis awareness. He discusses and exemplifies how concepts such as the *Anthropocene*, *acceleration*, and what he calls *family time* move into everyday life and into the often-politicized discourses of science and the media. Inspired by, among other things, the philosophy of time and ethnological cultural analysis of traditional, more cyclical and ritualized understandings of work and seasons, he discusses the new temporalities of the climate crisis. In his essay he emphasizes that the changes affect us culturally and existentially. In the rift between an increasingly impossible modernity and an intimidating future, people alive today find themselves in a shared experience of what the ancient Greeks called *kairos*: the time of the isolated and decisive moment.

Dag Avango discusses in his text how the circumpolar areas have been regarded and used as resource landscapes by economic and state interests. Paths and cracks of industrial history run through this exposé of the mining industry that has been established—and de-established in times of *bust*. With an empirical focus on northern Scandinavia and Greenland, the author outlines the complexity that characterizes the history of colonization in the Nordic Arctic region. The basic theoretical perspective comes from the ideas about sociotechnical relations and the analysis moves towards issues of resource management and sustainability today and in the future.

Annika E. Nilsson has worked as both a social scientist and as a science journalist. In her article she reasons about climate research while also arguing that people themselves are central resources in dealing with the man-made crisis. Nilsson surveys how climate researchers work with scenarios and geo-social analysis, but also looks to the future, discussing human resources and possibilities to bridge the local and the global.

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Converging around the earth's northernmost areas are several of the grand narratives of nature and mankind, each of them carrying its own meaning, power, and morality. Man, woman, the indigenous peoples or a guilt-ridden and expanding humanity—here the narratives change both subject and object. Today, research perspectives and public media alike are in the process of opening for new movements and new voices. No science—and no generation—alone can lay claim to something as mythical and controversial as the narrative of the Arctic areas which are in rapid motion today and are being thoroughly recharged.

When it comes to the Arctic—and no doubt other parts of the world too—questions of hope also contain a conflict of interest. How do we avoid romanticizing and sweeping problems under the carpet in the talk of the indomitable ability to adapt? How do we describe what is happening without getting caught up in either panic or denial? On one point it was insisted that we had to be particularly clear in the exhibition: global warming is not an untested hypothesis or a matter of outlook. Maintaining a firm stance against alternative truths must be included in a pluralistic ambition.

As for hope, the anthropologist Hirokazu Miyazaki (2004) has stressed that the ability to recreate it over and over again is crucial in different kinds of knowledge processes. His inspiration for this came in an ethnographic study of a group in Fiji who spent years searching the archives in a stubborn hope of finding valid documents, while simultaneously recreating their optimism in various ritual ways. In that light, hope no longer appeared to him to be a cultural phenomenon to study but a method in his own quest for

knowledge. Every research question and outlined study is based on—and at the same time a way to arouse—optimism about something being possible to understand better. At best, this encounter between voices and perspectives conveys something similar.

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As mentioned, this special issue *Tracing the Arctic; Arctic Traces*, features research articles that also form the spine of a catalogue *raisonné*, *Arktiska spår. Natur och kultur i rörelse* published by the Nordiska museet to offer the visitors of a major exhibition, "The Arctic—While the Ice Is Melting," a multifaceted and deeper understanding of the ongoing changes in the circumpolar region. While the final editing is a collaboration with the journal's editor, prior efforts and work of the editorial group at the Nordiska museet should also be recognized. Warm thanks to Anders Carlsson, Marie Tornehave, Karolina Kristensson and Flora Bartlett. A translation from Norwegian to Swedish was at a former stage offered by Barbro Blehr. Alan Crozier has—once more—done a terrific job in translating some of the texts from Swedish to English and in double-checking the language.

NOTES

[1] This article is a revised and translated version of the chapter "Arktiska spår. Om vägar och vävar över sprickorna" ['Arctic traces. On ways and weaves over the crevasses'] in Gustafsson Reinius (ed.) (2020), pp. 16–37.

[2] The statues are casts in bronze of works by the Danish sculptor August Saabye. The monument at the Marble Church was erected in 1913.

[3] "Hans Egede. Greenland votes on colonial danish statue," *BBC News* (16 July 2020); www.bbc.com/news/world-europe-53429950; access date 15 Dec. 2020.

[4] The statue is the work of the artist Christian Rosing.

[5] The myth is based on oral tradition but has also been disseminated through being recorded by Rasmussen, where the advisor of the sea is called *Ímap ukûa*.

[6] The quotation is translated by Alan Crozier from the Swedish original: *Jag måste försöka följa dem. Jag måste in i deras innerfickor. Jag måste in bakom orden i deras söndervittrade dagbokssidor. Jag måste förstå vad som händer med en människa som befinner sig mitt i packisen, utan att kunna ta sig därifrån. Jag måste in i isen, under skaren. Jag måste till platsen där de dog. Jag måste till Vitön.*

[7] A source as reliable as the annual report of data approved by the IPCC, the UN Intergovernmental Panel on Climate Change, speaks of an average increase in temperature of five degrees a year, compared to the two degrees it expects globally (see www.ipcc.ch/srocc/; access date 28 Dec. 2020).

[8] www.slu.se/ew-nyheter/2018/2/medborgarforskningsplattform/; access date 15 April 2020.

[9] More detailed acknowledgements at the homepage of Nordiska museet: www.nordiskamuseet.se/en/articles/thanks.

[10] This particular conversation can still be found on Stockholm University's website.

[11] "Balladen om stigarna i Västmanland" ['The ballad of the paths in Västmanland'] by Lars Gustafsson, is in his *Artesiska brunnar cartesianska drömmar. Tjugotvå lärodikter* (2016).

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