

# Colonizing the poles

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*'The first wave exploited tundra resources during the climatic optimum at a time when the conditions were warmer than today and much new land had been exposed by retreating ice conditions.'*

*'The Arctic region is now more accessible due to the Arctic melt. As a result, Arctic nations seem to be rushing to claim undeveloped and, in some cases, unseen territory and natural resources possibly worth hundreds of billions of dollars.'*

THE above quotes aim to describe and explain two periods of change in the Arctic – the arrival of the first settlers in Arctic North America and Greenland and the more recent arrival of oil and gas companies interested in the fossil fuels buried under Arctic continental shelves. Thousands of years separate the two contexts, but the dynamics of change are portrayed in a similar way: actors move into the Arctic as a consequence of a changing climate. There are many similar examples from publications on Arctic history, ranging from explanations of the emergence of the so-called Thule culture and Norse settlements on Greenland a thousand years ago to the growth and decline of the whaling industry centuries later.

In this article which discusses the role of climate change in histories of Arctic colonization, we question the notion that climate change is a major driver of such processes. We will argue that colonization in the Arctic must be understood as a consequence of a complex set of factors, climate and environmental change being only one and, most often, of only minor importance.

When the geographers Terrence Armstrong, George Rogers and Graham Rowley (1978) and David Sugden (1982) published their classic works on the Arctic (and Antarctic), they summarized much of the archaeological and historical research that was available at the time on why humans decided to settle in the Arctic. Since then scholars within history and archaeology have deepened our knowledge on how and why this region has been colonized and re-colonized over thousands of years. Although new perspectives have emerged, climate change still stands out as a very strong factor in explanations of Arctic historical change.

A good example are explanations of the arrival of the first settlers in the far north – by western scholars called the ‘Paleo-Arctic’ – who moved into the north-eastern parts of present day Siberia and Beringia around 29,000 BC and used the area until 5000 BC. During the same period groups of settlers established themselves in the Arctic parts of present day Fennoscandia. Just as elsewhere in the world at the time, they lived by hunting and gathering. Most archaeologists have explained their appearance on the Arctic scene as a consequence of the retreating ice sheets of the last ice age during a climate optimum which left new lands open for utilization by humans.

The second big surge in human settlement of the Arctic took place from 2500-100 BC, when peoples associated with what archaeologists have called the Arctic small tool tradition left north-eastern Siberia and settled across Arctic North America, from the Bering Strait and eastward, eventually settling the western coast of Greenland. Over time they developed different lifestyles, as expressed by differing material cultures, settlement patterns and economies ranging from caribou hunting and fishing to whaling and sealing. Just as in the case of the Paleo-Arctic, researchers have argued that these actors settled and changed as a consequence of climate change. The diversification of the Arctic small tool tradition into regional cultures, the argument goes, was triggered by a cooling climate that stimulated local adaptations such as the Dorset culture with its ice based seal hunting and snow igloos.

The third large change took place only 1000 years ago, when the Thule culture spread rapidly from the straits off northern North America and on Greenland, reshaping previous lifestyles in these areas. The Thule settlements were mostly in coastal locations and their economy based on whaling from Umiaks and Kayaks. The emergence of this culture has been explained as a result of migration of whale populations, again triggered by climate change: a warmer climate allowed bowhead whales to pass through the straits north of North America, giving rise to the importance of whaling in the Thule economy.

Finally, environmental factors have been used to explain a fourth colonization in the Arctic – the Norse colonization of south-western Greenland in the 10th century AD, in which people from Iceland under the leadership of Eirik the Red established two settlement areas in the south-western part of this huge island. Archaeologists have estimated that in 1100 AD, the population in these settlements consisted of 6000 people, 280 farms, four churches and a cathedral. From the 14th century, however, the Norse settlements came to a rather rapid end. Researchers have pointed out several factors to explain this rather dramatic historical trajectory, one of them being climate

and environmental changes. The establishment of the Norse settlements took place during a warmer period, which meant that the fiords and seas of Greenland became ice free and, therefore, easy to navigate. The warmer climate, supposedly, also favoured a longer growing season for crops, a longer period under which livestock could be kept outdoors and an abundance of fish. The decline of the settlement would have been caused by a colder climate from the 14th century, unfavourably affecting agriculture and livestock.

**T**hus, archaeologists and historians have tended to put a particular emphasis on environmental factors in their explanations of human colonization of the Arctic during the Holocene. This tendency, we argue, is a result of the paradigm of processual archaeology – a broader trend which dominated the discipline from the 1960s into the late 1980s – where environmental factors were prominent in explanations of change. When a major change in the archeological record coincided with an environmental change, the former was interpreted as a result of the latter. The idea of so-called ‘pre-historic’ cultures as ‘adaptive’ was an integrated part of this thinking – when the environment changed, people ‘adapted’.

From the 1980s, however, an increasing number of archaeological scholars have called this environmental determinism into question, arguing that humans experience and deal with climate and environmental change through the filter of cultural norms and in relation to social strategies. Humans change their lifestyles and economies in accordance with such norms and strategies, whether the climate is changing or not. Inspired by this post-processual paradigm in archaeology, scholars studying historical change in the Arctic have shifted attention to other drivers of change, such as social, cultural, economic and political factors, along with the role of processes of change outside of the Arctic. New interpretations open up as a result.

For instance, the early Paleo-Arctic settlers would have had generations of experience from living off the tundra of ice age Eurasia and would not have considered the Arctic as being any different. Later on, as their descendants moved into the lands of Arctic North America and Greenland, changing ideas and culture may very well have been the main reason, that is, cultures promoting the exploration of new land and new resources. Already in 1982, David Sugden pointed to such factors because of the rapidity of change and continuity of Arctic settlements.

In explanations of the rise and fall of the Norse settlements in Greenland, researchers have always considered a much wider array of factors than the environmental. The Norse settlements were partly living off trade with Europe, selling furs, ropes and

ivory from walrus, as well as wool, polar bear skins and Greenland falcons. When new supply areas for such products opened up for European traders, the Greenland Norse could not compete. This would partially explain their decision to abandon their settlements. The difference in explanation is interesting. Partly it is a result of the fact that there are more written sources available regarding the Norse settlements and their trade. However, in line with Bruce Trigger's classical work on the history of ideas in archaeology, it reflects a bias among European scholars to view indigenous societies as passive, changing only as a result of external pressures to adapt to new environment, unwilling if not unable to change in accordance with new ideologies and social strategies.

**M**ost scholars place the beginning of the Anthropocene in the 19th century, when Europe and North America went through a rapid process of industrialization, with associated natural resource exploitation on an unprecedented scale, reshaping the earth and its ecosystems. In the Arctic, Europeans had started extracting resources already in the 1600s through whaling.

The whaling companies harvested whale populations at Spitsbergen, Jan Mayen and Greenland. They hunted whales in the fiords and coastal seas and produced whale oil at onshore stations. Towards the end of the 1600s, they changed their strategy, abandoned their stations and instead hunted whale in the open seas and produced blubber in European ports after the end of the hunting season. Although historians have pointed out a variety of factors in explanations of this growth and decline of whaling, climate change have stood out as one of the prominent ones. The whalers established themselves at Spitsbergen at a time when the climate in the northern hemisphere was comparatively mild, providing access to fiords and hunting grounds. The time when they abandoned Spitsbergen for the open seas coincided with the beginning of the Little Ice Age, which left the sea ice in the fiords of Spitsbergen frozen through the summer.

**A**lthough climatic conditions may have influenced the strategies of the whaling companies, we argue that the colonization of the Arctic during this era must be understood in the broader context of the growth of European colonialism across the globe. Actors from Europe started a quest for precious metals such as silver and gold in the Americas and set up monopolies to secure exclusive opportunities to profit from trade. The whaling grounds of the Arctic were discovered in conjunction with attempts of European powers to find new shorter trading routes between Europe and Asia via the Northeast and Northwest Passages. The idea to harvest those whale populations was not much different from the idea to take

possession over resources elsewhere in the world during this period.

**F**rom the mid-19th century, the mining industry also found its way to the Arctic on a grand scale. In Arctic Scandinavia, companies from the south had set up mining operations already in the 17th century, but operations on a larger scale were started as a result of the huge demand for metals during the Industrial Revolution – Malmberget in the 1880s and Kiruna in 1900. In Greenland companies mined cryolite, copper, lead and zinc from the mid-1800s. Gold mining commenced in Arctic North America – first by placer miners and later by larger companies – from the 1890s. At Spitsbergen, mining companies started up large-scale coal mines from 1905. This second wave of resource exploitation did not take place during a period of climate change for the warmer. Quite to the contrary, the Little Ice Age meant that the climate was still in a state of cooling since almost 200 years back. Nevertheless, the boom took place and to explain why, we need to understand it within the broader context of the Industrial Revolution which was transforming European and North American economies at the time.

Industrialization resulted in an unprecedented demand for metals and energy resources and thereby it also changed the character of colonialism as European capitalists turned their eyes to the rest of the world for lands and resources needed in their growing industries – rubber and copper from southern Africa, petroleum from the East Indies, bauxite from the Caribbean, and so on. The Arctic was no exception to this trend; it was just another example of it. Economic actors in the growing industrializing economies connected Arctic geologies to larger production systems outside of the Arctic – cryolite mines in Greenland for aluminium production in Western Europe and North America, iron ore in Kiruna in Sápmi for the Swedish and European steel industries and coal mines at Spitsbergen for energy markets in Scandinavia and north-western Russia. In some cases global geopolitics underpinned industrial colonization, such as Sweden and Norway supporting mining companies in Spitsbergen in order to influence the future legal status of the archipelago and ultimately their position in international relations. Similarly, when companies operating in the Arctic eventually closed operations, they did so for economic and in some cases also geopolitical reasons, not because of any changes in the climate.

**S**tarting in the 1960s through the early 1980s, oil and gas companies moved into the Arctic, in a period when the climate was colder than during the preceding decades. This development was a result of changes in the international energy supply, triggered by a period of global turmoil associated with decolonization, including a whole range of key resource

supplying regions. Oil and gas demand grew at a tremendous pace and as the most easily accessible deposits were depleted, oil explorers pushed the frontier into less accessible places like deserts, jungles, deep seas and into the frozen lands of the far north. The oil and gas actors saw the Arctic as a promising land partly because there were no guerilla wars, terrorism, or sudden nationalizations to be feared. Higher energy prices stimulated the development of new technologies that solved ice-related problems.

The most recent surge of interest in Arctic resources started off in the early 2000s, this time in a context of anthropogenic climate change and a wide debate within science and media, which projected a future in which the Arctic Ocean would be free from ice in the summertime in a not too distant future. Climate change and its impacts cannot explain the resource boom that unfolded, however. The boom was triggered by high prices on energy resources and minerals on global markets. Politics also played a role. In Greenland – as well as in a range of other, non-Arctic regions from Scotland to South Sudan – actors viewed their mineral and energy resources as a source of income on which to build a possible political independence. In Russia – but also in China – internal political prestige is clearly another factor behind governmental support to Arctic development. The Arctic programmes of China and Russia can here be seen in the same political context as the space exploration programs of these countries.

The climate in the Arctic keeps getting warmer, but the heat in the recent resource boom has all but ended. Large scale mining projects such as the Isua mine in Greenland or the Kaunisvaara mine at Pajala in Arctic Sweden are closing down. Investments in prospecting and exploration decrease at a rapid pace and energy extracting companies turn their interest to new possibilities such as fracking. Retreating sea ice does not make much difference when global fuel and ore prices fall.

**I**n this article, based on examples from the distant past to the present, we have argued that human colonization of the Arctic cannot be explained persuasively by climate change. If this is true, why has this narrative become so dominant in the recent debate about the future of the Arctic? To answer this question we need to consider the general notion of what the Arctic is – a cold, inhospitable and very distant place, conditions that would discourage most people from not only going but also investing there. For this reason, actors with an interest to colonize and utilize resources there have had to produce narratives that could convince others of the feasibility of their projects, that is, rhetoric about the Arctic as a hospitable region.

Such narrative strategies have a long history. When Eirik the Red convinced fellow Icelanders to follow him to colonize the

Arctic in the late 10th century AD, he did so by naming his new lands 'Greenland'. In that way he hoped to make them sound more attractive for settlement (a method that apparently worked). In the early 20th century, the Arctic scientist and visionary Vilhjálmur Stefánsson argued along the same lines – the Arctic was friendly and, therefore, a place to further colonize and utilize for resource extraction.

**M**ining companies at the time were arguing along the same lines – Spitsbergen was not far and not too cold, but relatively near and with a climate warmed by the Gulf Stream, a place where it was perfectly feasible to conductive mining at a profit. During the most recent Arctic resource boom, extractive industries and their supporters produced similar rhetoric, this time motivated by their conviction that Arctic resources should be utilized and an ambition to convince investors, political decision makers and the general public that resource extraction there is feasible and desirable – and indeed unstoppable.

There is no doubt that the Arctic environment has always posed a challenge to actors who have wished to colonize it and utilize its mineral and living marine resources, but it is equally clear that actors have been able to deal with those challenges by developing the necessary technologies and lifestyles. Paleo-Arctic and subsequent settlers in Arctic North America, Greenland and Eurasia in the distant past, developed sophisticated technologies and life strategies with which they enabled themselves to cope with whatever local conditions they encountered.

The early modern whalers experienced the start of the Little Ice Age and no doubt encounters with more and more severe ice conditions, but dealt with it by developing pelagic whaling instead of shore station based technology. The oil, gas and mining companies of the 20th century found other ways of dealing with sea ice and the challenges of the Arctic environment, using new technology such as cargo ships that could cope with the ice, transport systems that remained functional in thick snow cover, local energy production, communities that could attract skilled personnel and promote social peace and drilling platforms that would just turn around with the surrounding ice floes.

Thus, the idea of climate change as a driver of human settlement and utilization of the polar regions is fundamentally flawed. When applied to indigenous societies it is an explanation echoing ideas that indigenous societies and cultures are bound by the state of their natural environments, destined to remain as they are unless the climate force them to 'adapt'. It is also a narrative that produces an image of a predetermined future, where our only choice is to accept that climate change will bring resource extraction to the Arctic in the future and that the only

thing we can do is to mitigate its consequences. In this way environmental determinism depoliticizes an issue that should be determined by politics: whether or not an industrial future for the Arctic is really desirable.

