Science as arbitrator on Arctic land-use issues: A historical appraisal

Urban Wråkberg

Abstract

The article offers a historical review of the practice of prioritizing scientific advice in land-use policies of the Arctic. It uses the high-arctic Svalbard archipelago as its main case study. It articulates the need for historians to contribute insights into the ways scientific communities have set much of the international agenda of Arctic and Antarctic matters over the last century. From a cultural heritage standpoint, today's situation on Svalbard illustrates some problems of the currently widely accepted ideas of global (Arctic) governance.

Keywords: Arctic cultural heritage; science diplomacy; Svalbard; polar tourism; Arctic governance; geodeterminism

Natural sciences and anthropological scholarship have long traditions of setting agendas on the Earth's polar regions. Since before the 18th century this has entailed Western colonial and sea-route oriented exploration. In the 19th century the idealistic tradition of Western thought instigated the principle of sharing scientific knowledge, including strategic geographical information by publication in academically accessible scientific journals. Agitation appeared at the time to coordinate Arctic research among states. Scientists expanded their international role into that of diplomats based on their European culture of gentlemanly conversations among scientific peers. This led among other to the series of multilateral cooperation called the Polar Years, with the first one undertaken in 1882-83 and the latest one in 2007-08.1

In the negotiations, before and after World War I, on the legal status and land uses on the then uninhabited terra communis of the Spitsbergen archipelago, pioneers of the environmental movement such as Hugo Conwentz played crucial roles. So did native scientists from several of the nations engaged in the Spitsbergen-negotiations in Oslo and Paris. In this process environmental and political agendas alike were presented by scientists, taking not only the role of advisors but as lobbyists and de facto diplomats.2 This pattern showed continuity in the establishment of the Antarctic Treaty in the 1950s. It is a legacy that largely remains to be studied historically through its ups and downs, including the 1996 establishment and work of the Arctic Council.

Science diplomacy remains influential in the international governance of the Antarctic continent given that the Western colonial heritage is identified as an obstacle by many so-called late-coming nations to the Antarctic science network. Indigenous peoples' representatives articulate the need for post-colonial scholarship on the relation of science to traditional knowledge and ways of life in the Arctic.

By international comparative projects historians can contribute insights into the ways scientific communities have steered agreements on Arctic and Antarctic matters, and on

1 Urban Wråkberg (2009). "IPY Field Stations: Functions and Meanings". In: Jessica M. Shadian & Monica Tennberg (eds). *Legacies and Change in Polar Sciences: Historical, Legal and Political Reflections on the International Polar Year*, Farnham: Ashgate, 47–71.

2 Urban Wråkberg (2006). "Nature Conservationism and the Arctic Commons of Spitsbergen 1900-1920". *Acta Borealia* 23, 1–23.

science continuing role as providers for national military and economic interests.3 Historical research can shed light on the current Western media alarmism on the future of the polar regions, not only in terms of sea-ice melting, but also regarding politics, and on the prospects of any internationally agreed future governance of the polar regions.

This article is based on field research made by interdisciplinary team-work on the High Arctic islands of Svalbard, which the author led and coordinated for the SWEDARCTIC program of the Swedish Polar Research secretariat in 1997-2002. I continued this research by other funding in 2005-2015. The article also draws on experiences from my on-going studies of tourism, politics and the history of the regions on both sides of the Norwegian and Russian Subarctic border, significantly the Norwegian County of Finnmark and Murmansk Oblast in Russia.

The article offers a historical review of the practice of prioritizing scientific advice in land-use policies of the Arctic. Its study area is the high-arctic Svalbard archipelago. It is situated in the Arctic Ocean midway between the North Cape of the Scandinavian Peninsula and the North Pole. Its population is some 2600 mostly Norwegian and Russian people living in three villages once established as mining camps. Today, Longyearbyen, Barentsburg and Ny-Ålesund house science research stations and facilities servicing local and cruise ship tourism. From a cultural historical standpoint, today's situation on Svalbard illustrates some deep-seated problems of the currently widely accepted ideas of global (Arctic) governance.

The first perspective presented in the following section argues that the history of ideas of Western environmentalism is crucial to know if to appreciate the importance of the ideological footing of Arctic governance. With no real support from history of technology and social anthropology, environmental activists often pit man against nature; but is this a modern Western cultural conundrum rather than a fundamental ontological dilemma? In the following, the environmentalist understanding of the nexus between "nature" and "humanity" will be placed in its Western cultural context. This is motivated among other by the insights accrued over recent decades from international research in the history and social construction of science. The understanding of science gained from this research stands in contrast to the popular perception of scientific knowledge as something neutral, fact-based and settled, which one can find in contemporary science text-books or by simply asking a scientist. However, history tells us that sound scientific research is never settled but an on-going international undertaking which depends crucially on open debate if it is to avoid stagnation in its attempt to provide improved, reliable knowledge.

The second perspective in the historical review of this article consist in a discussion of instances of land-use and failed heritage protection found on the Arctic archipelago of Svalbard. The sequence of events and causality of each case, I will suggest, depends on a dominance of the social interests of the science communities involved as advisors and that administrative decision-making has been based on simplistic belief in the timeless truth and integrity of scientific knowledge.

Science-based Arctic governance has grown in influence over the last fifty years and is today visible not only in the management of Svalbard but also e.g. in the Circumarctic endeavors of the Arctic Council. On Svalbard conservative land-use policies today stand

3 Pavel Devyatkin (2022). "Environmental Détente: U.S.-Russia Arctic Science Diplomacy through Political Tensions". *The Polar Journal* 12, 322–342.

in contrast to an earlier dominance of the economic interests of entrepreneurs from all signatory nations of the Spitsbergen Treaty to extract the energy and mineral resources of the islands, to service North Atlantic fisheries or international cruise ship tourism. Svalbard is Norwegian state territory under its jurisdiction. Equally valid is the Spitsbergen Treaty of 1920 according to which the islands are to remain demilitarized, but open to economic activity and for research on a non-discriminatory principle to citizens and organization of all signatory countries.

Ecological determinism

One way to explore contemporary Arctic governance is to relate it to the history of science, to environmental history and to focus the philosophical dilemma of man's proper engagement with nature. Present political visions of a coming sustainable "organic" society are pitted against the "colonial extractivism" of modern capitalism. It is important to relate this debate to its roots in Western history. Instead of introducing a hierarchical division with material "facts" and scientific knowledge on top of ideological or cultural beliefs, this article argues for a historical interpretation that emphasizes the connection between material and cultural levels. Socio-economic and technological change come about when humans act based on a seamless combination of these levels. This outlook is supported by studies demonstrating geo-determinism wrong in its assertion that physical geography determines what kind of human societies will evolve in a certain region or landscape.[4]

To regard scientific knowledge as socially constructed is not to argue for relativism—somehow claiming that any knowledge is equally valid. In many cases we can and do of course test and find knowledge viable by experience, and then use it in guiding e.g. technology. Contemporary scientific knowledge cannot be regarded the main level of explanation in social inquiries. Privileging e.g. ecological expertise as an arbitrator of northern land-use entails underestimating the problem-solving power of technological innovation, proven throughout human history since long before that appearance of modern science in Europe in the 17th century. In the Subarctic the relationship of scientific expertise to traditional wisdom of indigenous peoples presents a further complication.[5] Presenting ecology as the yardstick to solve any land-use conflicts creates a historiography of human land-uses branded by ecological determinism.

Various kinds of determinism have had influence in geography, historical materialism is one of them. Scientific field observations of cultural landscapes, including northern so-called wilderness, have often been made under a deterministic view on human culture as dependent on, or even resulting from nature. But is the development and history of a human society determined by environmental factors like the topography and soil of its home region, annual rainfall, climate variations, by the availability of easily mined mineral deposits and differences in the immune defenses of the studied population vis-a-vis immigrants or neighboring populations? Or are the impact of such factors modified

[4] Sheila Jasanoff (2010). "A Field of Its Own: The Emergence of Science and Technology Studies". In: Frodeman et al. (eds), *The Oxford Handbook of Interdisciplinarity*. Oxford: Oxford University Press, 191–205; Robert E. Kohler & Jeremy Vetter (2016). "The Field". In: Bernard Lightman (ed), *A Companion to the History of Science.* Chichester: John Wiley, 282–295; Vesa Väätänen (2022). "The Construction, Solidification and Political Implications of Geographical Scientific Facts: A Perspective on the 'Changing' Arctic Region". *Geoforum* 128, 21–32.

[5] See for example: Chui-Ling Tam et al. (2021). "Climate Change Totems and Discursive Hegemony Over the Arctic". *Frontiers in Communication* 6, 1-6.

to an important degree by human culture: social organization, traded knowledge and experience, technology, mentalities, religious beliefs, information dissemination or by random circumstances and coincidences in general? If material aspects are emphasized over cultural dependence, the course of history will appear to be determined by the natural environment.6

Donald Worster, an influential American environmental historian at the time when this field of scholarship gained influence in the 1980s, discerned three levels of analysis in the study of the human–nature nexus—ecology, economy and ideology. In this he placed ecology at the fundamental level, not as object of analysis but as provider of norms for human behavior. A similar readiness to import scientific facts and data into historical studies also characterized, well into the 1970s and 1980s, research within the influential French *Annales school* of historical research. One of its later prominent historians Roger Chartier modified *the Annales* school's hierarchical ordering of material and cultural levels of reality by arguing that the relationship between the material and the ideological levels of reality and thus history "is not one of dependence of the mental structures on their material determinations. The representations of the social world themselves are the constituents of social reality."7 According to Chartier, economic or social conditions neither precede nor determine cultural ones. The two former areas of activity are in themselves cultural fields that cannot be explained deductively basing them on a reference to some extra-cultural dimension of experience.8 Cutting edge scholarship of the *Annales* school thus disputed ecological determinism already in the 1980s while basing Arctic governance foremost on science is still regarded unproblematic by a majority of Western political decision-makers and state administrators.

Anyone not a scientist, who would like to use science as an arbiter of environmental issues, faces the task of navigating the scientific literature to evaluate what is the best and most relevant research to be used. The alternative is to be blindly dependent on experts. But already the choice of such experts is a process calling for scientific insights which the layman often lacks. Nevertheless, this is what non-scientists need to do: read up on research and listen to more than one school of experts. Sound science means there are competing ideas inside its communities to consider,9 and regarding Subarctic land-use there are many other experts to take into account: scholars, the military, local business entrepreneurs, international investors and indigenous people.

---

6 David N. Livingstone (1990). "Geography". In: R.C. Olby, G.N. Cantor & M.J.S. Hodge (eds), *Companion to the History of Modern Science.* London: Routledge, 752–754; David N. Livingstone (1984). "The History of Science and the History of Geography: Interactions and Implications". *History of Science* 22, 283-290; Richard Peet (1985). "The Social Origins of Environmental Determinism". *Annals of the Association of American Geographers* 75, 323.

7 Roger Chartier (1982). "Intellectual History or Sociocultural History? The French Trajectories". In: Dominick LaCapra & Steven L. Kaplan (eds), *Modern European Intellectual History: Reappraisals and New Perspectives*. Ithaca: Cornell University Press, 40–41.

8 Lynn Hunt (1989). "Introduction: History, Culture, and Text". In: Lynn Hunt (ed.), *The New Cultural History.* Berkeley: University of California Press, 1–22.

9 Barry Barnes & David Edge (eds) (1982). *Science in Context: Readings in the Sociology of Science.* Milton Keynes: MIT Press, 233-249; H.M. Collins, "Certainty and the Public Understanding of Science: Science on Television". *Social Studies of Science* 17 (1987), 689–713.

Science and scholarship in the management of Svalbard cultural heritage

The protection of the historical and archaeological heritage of Spitsbergen was thoroughly discussed already in the German national proposal edited by Hugo Conwentz and sent to the partners at the 1914 negotiations on the status under international law of the islands.10 Spitsbergen was discovered in 1596 AD during one of Willem Barents expeditions in search of a northern sea-route to the Pacific. On the brink of World War I the islands had a rich cultural heritage of abandoned items, shipwrecks, graves and ruins after built structures originating from the Dutch and British whaling period of the 17th century. Russian huts could be found many places after over-winterings made in the 19th century by Pomor fur trappers from the White Sea region. Due to the remoteness and cold climate much of this was well-preserved. Entrepreneurs from several nations operated coal mines on the islands already before WWI. This business went through a boom under the high prizes set on coal after the war. In 1918, as one of many more important issues on the agenda of the Paris peace negotiations, Norway was offered and later accepted to extend its sovereignty over Spitsbergen, taking on the task of administrating the archipelago under the special clauses of the Spitsbergen Treaty conceived in Paris.11 On Norwegian initiative the islands were later renamed Svalbard, after a brief mentioning in the Icelandic Sagas of an eastward Viking voyage.

Before 1914 cruise tourism to Spitsbergen was already significant while the number of ships and landings on the islands differed a lot between years. People of means made hunting tours up-north on private yachts, field scientists of many nations and a growing number of Norwegian fur trappers, walrus hunters and down collectors all put pressure on the wildlife. Human built structures from previous époques were damaged and old Dutch whalers' graves on northwestern Svalbard were ravaged by souvenir-hunting skull-picking tourists of every nationality. Norwegian hunters re-used planks from any old huts they sailed by to build their own lodgings as there are no planks or straight timber to be found on treeless Svalbard apart from what can be used in agglomerations of driftwood which appears in certain places on its beaches. Due to the Norwegian economic interest to facilitate its trapping business on the island little was done in the direction of hunting regulations and nature protection, until the bans on Polar Bear and Polar Reindeer hunting appeared in the 1950s.

The Norwegian geographer Adolf Hoel lobbied for Svalbard fur trapping from his position as leader from 1928 of the Norwegian State Agency of Research on Norway's Arctic possessions (Norges Svalbard- og Ishavsundersøkelser). The political governance of Svalbard decided on by a series of Norwegian governments focused two things: securing regional North-Norwegian incomes from trapping and saving on any spending on Svalbard management. Hoel argued in vain for establishing nature reserves until the outbreak of World Warr II.12 During this period the Governor of Svalbard (Sysselmesteren på Svalbard) showed little interest to protect the internationally mixed

10 Hugo Conwentz, (1914). "Über den Schutz der Natur Spitzbergens: Denkschrift der Spitzbergenkonferenz in Kristiania 1914 mit Beiträgen von H. Pohl und H. Spethmann". *Beiträge zur Naturdenkmalpflege* 4, 65–137; Urban Wråkberg (2006). "Nature Conservationism and the Arctic Commons of Spitsbergen 1900-1920". *Acta Borealia* 23, 1–23.

11 Mary Katherine Jones (2012). "Charles Rabot's Arctic Idée Fixe: Spitsbergen Coverage in *La Géographie*, 1900–1920". *The Polar Journal* 2, 285–288.

12 Dag Avango & Peder Roberts (2017). "Heritage, Conservation, and the Geopolitics of Svalbard: Writing the History of Arctic Environments". In: L.A. Körber, S. MacKenzie & A. Westerståhl Stenport (eds), *Arctic Environmental Modernities*. Cham: Palgrave Macmillan, 125–143.

cultural heritage of the islands. Some observers have seen this as part of an unofficial Norwegianization policy applied on Svalbard, but more striking is the growing role throughout the 20th century of Norwegian scientists as arbitrators on all Svalbard matters.

It was only in 1974 that a regime on cultural heritage protection was extended to Svalbard. Directives on cultural heritage protection, along with a small staff of field inspectors in the Governor's office on Svalbard to enforce it, appeared in 1992 and exhibit some peculiarities. Tellingly the directives were part of the environmental regulation of Svalbard. The legislation introduced an odd setting of a deadline in 1946 defining the minimum age that any material memories of human activities on the islands must have to qualify for protection as Svalbard cultural heritage. Its main points are:13

- All monuments and finds from before 1946 are automatically protected.
- Certain things are automatically protected, however recent they may be. This includes human graves, and hunting and trapping equipment as well as all kind of bones produced at sites where walruses have been slaughtered and at places of bear trapping.
- Cultural monuments and finds that are more recent than 1946 can be protected by resolution.
- Around each cultural monument there is a protective zone of 100 metres. The Governor of Svalbard can authorise that the size of the protective zone at a particular site is reduced.
- Larger protective zones can also be designated.
- Modern use and development of a particular area on Svalbard that involve any movement of cultural monuments requires permission from the Directorate for Cultural Heritage, Oslo. Those in charge of such an undertaking must pay for the archaeological excavations that the Directorate considers to be necessary.
- The export of cultural finds is forbidden.
- Foreign expeditions can apply for permission to excavate sites of historical interest.

The late arrival of cultural heritage management on Svalbard have had some political implications. Scholarship on cultural heritage has demonstrated that any protective regulation, if set unprofessionally, may get biased by partisan interests. This causes differences in visibility between heritage of different kinds and origin; some memories get suppressed while others will dominate by their superior state of preservation.14 The state of Svalbard historical heritage especially prior to 1974 mirrors the agency of those who took an effective interest in the heritage and meanings of a site and those who didn't. One significant building in the industrial and scientific history of Svalbard is the so-called Swedish house built in 1872 as a workers' camp for a Swedish attempt at mining at the time. It was later used for a wintering for scientific purposes during the first international polar year 1882-1883. The house was in a bad condition when in 1982 its roof was finally renovated and windows were repaired, securing it for posterity on the initiative of Svalbard's first cultural heritage manager Susan Barr.15

In contrast the scientific station and base camp, named *Polhem*, of the wintering Swedish expedition that failed to reach the North Pole as planned in 1872-1873, is today a heap

13 Quoted after: Lyder Marstrander (1999). "Svalbard Cultural Heritage Management". In: Urban Wråkberg (ed.), *The Centennial of S.A. Andrée's North Pole Expedition*. Stockholm: Royal Swedish Academy of Sciences, 128–129.

14 Derek Gillman (2010). *The Idea of Cultural Heritage*, 2nd. rev. ed. Cambridge: Cambridge University Press.

15 Karen Thommesen & Siri Wolland (2016). "Polardronningen – Susan Barr og kalde kulturminner". *Alle Tiders: Riksantikvarens Magasin*, 18.

of planks on its coastal site in Mossel Bay on northern Svalbard. Its participants were saved from perishing from scurvy by the British Arctic explorer Benjamin Leigh Smith in the spring of 1873.16 Due to the natural preservation from root provided by the Arctic environment, some of the walls of the station were still standing in the 1990s.17 Many Swedish scientists and exclusive tourists have visited the site throughout the 20th century, but no one cared to raise private or state funding to help the Norwegian administration and its governor's office in Longyearbyen to preserve *Polhem*. Swedish scientists' indifference to their own heritage also caused the Argentinean state to have to on its own renovate and preserve the historic station house after the first Swedish-Argentinean Antarctic expedition to the Antarctic peninsula in 1901-03.

In contrast, built structures communicating the memory of the Norwegian boom in fur trapping on Svalbard in the 1930s have been taken better care of. Since cultural heritage only recently became an argument in discussions over land-use on Svalbard the reason for this appears to be geopolitical. In any case these huts work as national markers in the landscape of Norwegian dexterity, while in public terms these huts are maintained as emergency cabins, in case any traveler in their vicinity would need shelter after a logistical mishap or to wait for the weather to improve. The hut built in 1904, and improved on until 1935, by the famous Norwegian fur trapper Henry Rudi on Half Moon Island (Halvmåne øya) off the remote south-easternmost coast of Svalbard was renovated in 1995 and is in very good condition.

The dominance of environmentalism in Scandinavian politics and Svalbard governance combined with the 1946 arbitrary timeline on preserving any historical heritage, can explain other oddities in the regional industrial heritage management. After the politically motivated closure of the modern, still functional coal mines at Sveagruva, situated on the northeastern end of the Van Mijen Fjord on central Svalbard, a policy of radical "restoration" of the site back to its "pristine" state, was decided on. The real estate on the site was not left to decay naturally into ruins, but actively demolished, with their building parts shipped to mainland Norway for further destruction. However, material memories of human activities on Svalbard have potential as cultural heritage and ruins are of particular interest for tourism. Most Arctic tourists find ruins to be fascinating historical objects, signs of human ingenuity and survival skills in an extreme environment. To a minority of the same public the closure and demolition of the Svea coal mine was a triumphant environmentalist expenditure of funds; the operation cost Norwegian taxpayers 1.9 billion NOK, 165 million EUR.18 There were arguments that the Sveagruva premises held asbestos containing building elements, and harmful mining tailings, nevertheless the spending was extravagant. This post-industrial act of restoration "back to nature" is dubious also geopolitically if seen as an attempt at setting prohibitively costly standards for other nations operating industry on Svalbard. Parts of the Sveagruva site contained older structures built by the first mining company active on the site in 1917 and onwards, the demolition was a threat to these remains and thus a violation of the Svalbard 1946 deadline on cultural heritage protection.

16 Urban Wråkberg (2021). "Adolf Erik Nordenskiöld and His Svalbard Expedition of 1872–73". In: Pete Capelotti (ed.), *The Coldest Coast: The 1873 Leigh Smith Expedition to Svalbard in the Diaries and Photographs of Herbert Chermside.* Cham: Springer Nature, 9-29.

17 Personal communication with Svalbard tourist operator Anna-Lena Ekeblad, July 2002.

18 My take on this affair differs from that of: Cecilie Vindal Ødegaard (2021). "Sosiale drama på Svalbard: Tilbakeføring til natur og fortellinger om en ny tid". *Naturen* 145, no. 2–3, 138–147.

The most resilient and affordable of the local Norwegian and Russian tourist operators' tours on offer in Svalbard are day-cruises between Longyearbyen, with its airports and hotels and Barentsburg with hotel and bars, and the Soviet coal mine and "ghost town" of Pyramiden. Arctic nature and vistas over the fjords are attractions on such cruises but these locations are all old company towns with dramatic histories and rich industrial heritage as their main sources of fascination.19

The pressure continues to build against Arctic tourism and the possibility for lay people to view Svalbard's cultural heritage. More and more of the islands are declared nature reserves and landings on its coasts by local tourist operators, cruise ships and private yachts are prohibited. In January 2023 the Norwegian cruise ship operator *Hurtigruten* raised public concerns against the Norwegian State Environment Agency's new regulations setting even more restrictive limits to other than scientific research journeys on Svalbard. Svalbard tourist operators joined in protest-marches on main street in Longyearbyen against the catastrophic impact the extended environmental and biodiversity reserves will have to their business. Svalbard tourism in the future, they claim, will be very costly and exclusive, open only to the most affluent among international tourists.20

An outlook based on history

The rise of European idealism in the early nineteenth century meant that science with its older Baconian focus on the beneficial uses of its research got reinvigorated in line with the spirit of those times as an altruistic international endeavor of gaining knowledge for its own sake. In reality 19th and early 20th century polar exploration was largely driven and funded as part of the global colonial competition among the Worlds industrially dominating countries.

The 1930s saw the introduction in the polar regions of new technologies such as radio communication and flight. During WWII military conflict several sciences esp. meteorology proved of strategic value in the high north. The Cold War became a period of secrecy, non-sharing of strategic information between the nations of the Warsaw Pact and NATO. Polar research was guided by state agencies to military interests, while in the process the first solid field data emerged that provides the ground for the present dominance of climate change related research.21

Scientists made their way into high-level diplomacy in the international cooperation at the end of the Cold War. Scientific cooperation was part of the several ideas put forward in Mikhail Gorbachev's Murmansk declaration, but it also contained a very business-friendly perspective promoting international partnerships in not only science but also for Arctic industrial developments and investments.22 The preservationist view on

19 Urban Wråkberg (2018). "Tourism in the Subarctic and the Baltic Sea Regions of Europe". *Arctic and North* 32, 4–14.

20 Rune Nordgård Andreassen (January 16, 2023). "Strammer inn ferdsel på Svalbard". Tromsø: Norwegian Broadcasting Corporation regional news channel *Nordnytt*, at 5.14min. https://tv.nrk.no/serie/distriktsnyheter-nordnytt/202301/DKTR98011623/avspiller.

21 Ronald E. Doel, Robert Marc Friedman, Julia Lajus, Sverker Sörlin & Urban Wråkberg (2014). "Strategic Arctic Science: National Interests in Building Natural Knowledge – Interwar Era through the Cold War". *Journal of Historical Geography* 44, 60–80.

22 Mikhail Gorbachev (1987). *The Speech in Murmansk at the Ceremonial Meeting on the Occasion of the Presentation of the Order of Lenin and the Gold Star Medal to the City of Murmansk, October 1, 1987.* Moscow: Novosti Press Agency.

northern nature has come to dominate the agenda of the Arctic Council (AC). It is a forum of high-level political decision-makers: diplomats, indigenous people's representatives and scientific experts, in which the latter group has a uniquely privileged position to tell not only what they think "nature allows" anyone to do in the Arctic but also to promote their own interest for more resources to conduct their favorite research. From the point of view of historiography, it suffices to say that AC and the way leading up to it is prominent position in the minds of Western journalists and environmental activists is in need of broad historical analysis.

Among current Arctic uncertainties is of course what the consequences will be of the AC disbanding partnership with Russia? The recent exclusion of Russian participation in the AC coincides with a Russian turn of interest away from international science towards applying science domestically in developing the northern sea route and building Subarctic energy and raw material production. Will politics slide back into those of the Cold War? Most observers realize that Russia cannot be left out of the Circumarctic equation and with China as an observer in the AC, investor and contributor to Arctic science and technology, things may change. Some believe there is a politically multipolar world rising, so it might be motivated to ask if the idea of a Circumarctic globally governed by science diplomacy will turn into something "sectorially" divided — a future that, as Arctic historians know, has a past in Arctic geopolitics that might be learnt from.

Literature

Avango, Dag & Peder Roberts (2017). "Heritage, Conservation, and the Geopolitics of Svalbard: Writing the History of Arctic Environments". In: Lill-Ann Körber, Scott MacKenzie & Anna Westerståhl Stenport (eds.), *Arctic Environmental Modernities*. Cham: Palgrave Macmillan, 125–143.

Barnes, Barry & David Edge (eds.) (1982). *Science in Context: Readings in the Sociology of Science.* Milton Keynes: MIT Press, 233-249.

Chartier, Roger (1982). "Intellectual History or Social History: The French Trajectories". In: Dominick LaCapra & Stephen L. Kaplan (eds), *Modern European Intellectual History: Reappraisals and New Perspectives*. Ithaca: Cornell University Press, 13–46.

Chui-Ling Tam, Suzanne Chew, Anabela Carvalho & Julie Doyle (2021). "Climate Change Totems and Discursive Hegemony Over the Arctic". *Frontiers in Communication* 6, 1–6.

Collins, H.M. (1987). "Certainty and the Public Understanding of Science: Science on Television". *Social Studies of Science* 17, 689–713.

Conwentz, Hugo (1914). "Über den Schutz der Natur Spitzbergens: Denkschrift der Spitzbergenkonferenz in Kristiania 1914 mit Beiträgen von H. Pohl und H. Spethmann". *Beiträge zur Naturdenkmalpflege* 4, 65–137.

Devyatkin, Pavel (2022). "Environmental Détente: U.S.-Russia Arctic Science Diplomacy through Political Tensions". *The Polar Journal* 12, 322–342.

Doel, Ronald E., Robert Marc Friedman, Julia Lajus, Sverker Sörlin & Urban Wråkberg (2014). "Strategic Arctic Science: National Interests in Building Natural Knowledge – Interwar Era through the Cold War". *Journal of Historical Geography* 44, 60–80.

Gillman, Derek (2010). *The Idea of Cultural Heritage*, 2nd. rev. ed. Cambridge: Cambridge University Press.

Gorbachev, Mikhail (1987). *The Speech in Murmansk at the Ceremonial Meeting on the Occasion of the Presentation of the Order of Lenin and the Gold Star Medal to the City of Murmansk, October 1, 1987.* Moscow: Novosti Press Agency.

Hunt, Lynn (1989). "Introduction: History, Culture, and Text". In: Lynn Hunt (ed.), *The New Cultural History.* Berkeley: University of California Press, 1–22.

Jasanoff, Sheila (2010). "A Field of Its Own: The Emergence of Science and Technology Studies". In: Frodeman et al. (eds), *The Oxford Handbook of Interdisciplinarity*. Oxford: Oxford University Press, 191–205

Jones, Mary Katherine (2012). "Charles Rabot's Arctic Idée Fixe: Spitsbergen Coverage in *La Géographie*, 1900–1920". *The Polar Journal* 2, 274-290.

Kohler, Robert E. & Jeremy Vetter (2016). "The Field". In: Bernard Lightman (ed), *A Companion to the History of Science.* Chichester: John Wiley, 282–295.

Livingstone, David N. (1990). "Geography". In: R.C. Olby, G.N. Cantor & M.J.S. Hodge (eds), *Companion to the History of Modern Science.* London: Routledge, 743–759.

Livingstone, David N. (1984). "The History of Science and the History of Geography: Interactions and Implications". *History of Science* 22, 271–302.

Marstrander, Lyder (1999). "Svalbard Cultural Heritage Management". In: Urban Wråkberg (ed.), *The Centennial of S.A. Andrée's North Pole Expedition*. Stockholm: Royal Swedish Academy of Sciences, 119–135.

Nordgård Andreassen, Rune (January 16, 2023). "Strammer inn ferdsel på Svalbard". Tromsø: Norwegian Broadcasting Corporation regional news channel *Nordnytt*, at 5.14min. https://tv.nrk.no/serie/distriktsnyheter-nordnytt/202301/DKTR98011623/avspiller.

Peet, Richard (1985). "The Social Origins of Environmental Determinism". *Annals of the Association of American Geographers* 75, 309–333.

Thommesen, Karen & Siri Wolland (2016). "Polardronningen – Susan Barr og kalde kulturminner". *Alle Tiders: Riksantikvarens Magasin*, 16–24.

Vindal Ødegaard, Cecilie (2021). "Sosiale drama på Svalbard: Tilbakeføring til natur og fortellinger om en ny tid". *Naturen* 145, no. 2–3, 138–147.

Väätänen, Vesa (2022). "The Construction, Solidification and Political Implications of Geographical Scientific Facts: A Perspective on the 'Changing' Arctic Region." *Geoforum* 128, 21–32.

Wråkberg, Urban (2021). "Adolf Erik Nordenskiöld and His Svalbard Expedition of 1872–73". In: Pete Capelotti (ed.), *The Coldest Coast: The 1873 Leigh Smith Expedition to Svalbard in the Diaries and Photographs of Herbert Chermside.* Cham: Springer Nature, 9-29.

Wråkberg, Urban (2009). "IPY Field Stations: Functions and Meanings". In: Jessica M. Shadian & Monica Tennberg (eds), *Legacies and Change in Polar Sciences: Historical, Legal and Political Reflections on the International Polar Year*. Farnham: Ashgate, 47–71.

Wråkberg, Urban (2006). "Nature Conservationism and the Arctic Commons of Spitsbergen 1900-1920". *Acta Borealia* 23, 1–23.

Wråkberg, Urban (2018). "Tourism in the Subarctic and the Baltic Sea Regions of Europe". *Arctic and North* 32, 4–14.

Urban Wråkberg
UiT The Arctic University of Norway
16-04-2023

Images, with captions, to Urban Wråkberg's article for the journal *Istoriya* on the theme "The European North and the Baltic Sea Region: History and Historiography".

	Fig. 1 The "Swedish House" built in 1872 by a mining enterprise launched by industrialist Oscar Dickson and polar explorer Adolf Erik Nordenskiöld. It still stands at Icefjord on Svalbard. Photo Urban Wråkberg, September 2011. [Place before or after the paragraph containing reference 15.]
	Fig. 2 The remains of the house of the 1872-73 over-wintering station in Mossel Bay, Svalbard. Photo Urban Wråkberg, September 2011. [Place after the paragraph containing reference 17]
	Fig. 3 The camp of the legendary polar bear hunter Henry Rudi on Half Moon Island, Svalbard. Photo Urban Wråkberg, September 1998. [Place before the paragraph containing reference 18]

	Fig. 4 Coal storages of the Sveagruve mine when it was still in operation, Van Mijenfjord, Svalbard. Photo Urban Wråkberg, September 2000. [Place after the paragraph containing reference 18]
	Fig. 5 Tourists on a guided tour around Barentsburg, the main Russian settlement on Svalbard. Photo Urban Wråkberg, August 2019. [Place somewhere after the paragraph containing reference 20]