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TINA ADCOCK & PEDER ROBERTS

Nations, Natures, and Networks

The New Environments of Northern Studies

Change is a prominent, even ubiquitous theme of early twenty-first century discussions about the North. The rapid decrease of sea ice in the last decade has placed northern ecosystems under multiple kinds of stress. It has simultaneously prompted visions of newly traversable shipping lanes, newly accessible deposits of minerals, and newly possible connections to markets and consumers far to the south of the Arctic Circle. This description of the "New North" or "New Arctic" (Stuhl 2013; Doel, Wråkberg & Zeller 2014) is now familiar, even bordering on clichéd. That this is the case speaks to the startling rapidity with which scholarly perspectives on this region have changed. Not so long ago, as Dolly Jørgensen and Sverker Sörlin (2013) remind us in their introduction to *Northscapes*, historians in more temperate climes imagined the North as a place without history and a place outside of time—a static, cold, and isolated space of little relevance to grand narratives of human affairs.

Contemporary academic understandings of the region have done much to thaw this North, frozen in both time and space. Scholars working at the confluence of history, geography, and environmental science have begun to re-emphasize a point that the French-Canadian geographer Louis-Edmond Hamelin made decades ago: that "there are so many Norths within the North" (Hamelin 1978: 7). There is no single Northern environment or idea of North, but rather multiple spaces and places that have shaped and been shaped by different constellations of physical, political, economic, and cultural factors. Newer Northern schol-

arship also lays to rest any lingering notions of regional isolation by highlighting the longstanding connections between the North and other places. This "networked North" is one in which people, animals, information, raw materials, and commodities animate particular routes and trajectories, casting a shifting web of movement over the planet (F.A. Jørgensen 2013).

The newfound sensitivity of Northern scholars to global historical networks arises in part from their increasing participation in more-than-national forums today. Political organizations such as the Arctic Council and the Inuit Circumpolar Council are established fixtures, but so too are academic forums such as the International Congress of Arctic Social Sciences. The flurry of scholarly activity associated with the most recent International Polar Year (IPY) of 2007–2008 created a raft of new multidisciplinary and multinational initiatives, in which humanists and social scientists were more prominent than ever before. It is perhaps no coincidence that environmental historians and historians of science have figured prominently in the "new northern history," a strand of scholarship central to this forum. Motivated principally by thematic questions and literatures, and unafraid to cross disciplinary borders in search of new tools and methods, these historians seem less concerned than others to confine themselves to national(ist) traditions and frameworks of inquiry. They have instead pursued research across national historiographical boundaries. In crossing borders so readily, they also reflect and refresh perspectives native to the field of northern studies, which has been both interdisciplinary and multinational from its inception in the mid-twentieth century.

As Jørgensen and Sörlin (2013) note, this new networked history of northern science and environment is still emerging. We (the forum's editors) came of scholarly age during the most recent IPY, and international networks have shaped our careers in fruitful ways. We took our doctoral degrees in England (Cambridge) and the United States (Stanford), but were able to spend time in other countries talking to Northern scholars with different perspectives. Inspired to give others at a formative stage of their careers an opportunity to develop similar cross-border connections, we invited junior and senior scholars with Northern interests, principally from Canada and Scandinavia, to Stockholm to discuss different national and transnational approaches to northern environmental history at a meeting held in late 2013. We heard not only from environmental historians, but also from geographers, anthropologists, and scholars of comparative literature, media and cultural studies, and science and technology studies. While many of these scholars pursued the foundational question of environmental history—that of the past relationships between humans and environments—very few identified themselves directly with the thematic sub-discipline

of environmental history. The essays in this special forum, all written by early-career scholars who attended this meeting, demonstrate that the field of Northern studies has much to contribute to emerging transboundary histories of northern science and environments.

The four essays present historical and historiographical analyses framed with an eye toward current events and issues. Several undertake new variations on a principal research theme that Klaus Dodds and Richard Powell identify: how Arctic environments can be enrolled in the work of "imagining and positioning various resource-led futures" (Dodds & Powell 2013: 4). Both textual and visual representations played a key role in formulating and realizing such visions. Janina Priebe considers how an early twentieth-century consortium of Danish businessmen and scientists constructed a narrative of Greenland as a place ripe for economic development. Claiming the superiority of free-market ideology to the colonial monopoly of the Danish state over Greenlandic commerce, the consortium argued that the "rational," capitalistic exploitation of natural resources would further Denmark's economic growth and aid the local Greenlandic population. The "scramble for the Arctic"—a phrase that evokes nineteenth-century Great Power colonialism in Africa—has been reappropriated to serve twenty-first-century debates about the North (see also Craciun 2009). Moreover, as Priebe shows, the characterization of Northern spaces as ripe for development is hardly new. Foregrounding the process by which particular modes of economic activity are rendered logical, even "natural," is crucial if we are to understand how descriptions of northern environments intertwine with arguments concerning the kinds of activities that "ought" to take place within them.

Rafico Ruiz's essay centres on a seemingly quintessential polar object: the iceberg. He reveals how scientists and engineers in the second half of the twentieth century sought to convert icebergs into quantifiable commodities, a quest that continues even today. As in Priebe's essay, the commodification of Northern phenomena went hand in hand with an image of the North as a space for future development. The iceberg becomes a "wasted" source of fresh water awaiting rational exploitation. Drawing upon insights from media studies and science and technology studies, Ruiz demonstrates how icebergs were rendered controllable and predictable objects through specific strategies of visualization, calculation, and forecasting. By historicizing the desire to represent and control icebergs in the service of economic gain, Ruiz draws attention to the complex ancestry of the computer-generated figures produced by present-day advocates of iceberg harvesting. His essay reminds us that even the most iconic components of Northern environments are mediated by southern values and technologies so as to facilitate their control.

Both Priebe's and Ruiz's essays recall an important argument that An-

drew Stuhl (2013) has recently made: that future-oriented visions of abundant northern resources are often veiled expressions of power. Analyzing the "New North" narratives that surfaced periodically throughout the twentieth century, Stuhl reveals that these stories not only described change, but also attempted to structure and direct the very nature of that change. In this spirit, Janet Martin-Nielsen surveys recent academic and popular "reconceptualizations" of the North. After comparing their agendas and placing them in historical context, she concludes that most of these twenty-first-century reconceptualizations are not as new as they first appear. In an era of proliferating human and environmental connections between northern and southern places, who truly "belongs" in the twenty-first-century North? What do future projections of the North reveal about the anxieties of the present? And how can humanistic and social scientific critiques of these reconceptualizations inform political interventions—if indeed they should? Just as Stuhl warns that "only by erasing or defacing history could the Arctic be deemed new" (2013: 114), Martin-Nielsen concludes that scholars can bring informed historical perspectives to public dialogues, and can thereby challenge deterministic visions of the future North.

Dagomar Degroot's essay brings the Little Ice Age into analyses of European exploration of the North through a close reading of the journals produced during Henry Hudson's voyages in the early seventeenth century. Degroot delineates a fine balance in which humans are able to determine their actions even within environmental constraints, and in which local northern conditions responded in complex, even counterintuitive ways to global cooling. He rightly critiques climate historians for writing declensionist narratives of the Little Ice Age's effects, but also points out that historians of Northern exploration and navigation have paid insufficient attention to the possibility of environmental change over time.

Degroot fears that the overwhelming global warming of recent years may leave less room for nuanced assessments of the influence of climate upon human affairs. We share this concern, but would take it even further. Visions of dramatic and inescapable change of any kind risk imposing deterministic narratives that render contingent events and actions inevitable, with very real consequences for how Northern people and places are treated. Historians have long debunked simplistic narratives about the southern conquest of Northern spaces. The assertion of authority over distant environments and their residents was hardly ever a straightforward process. Would-be colonizers and entrepreneurs have often met with resistance both from indigenous peoples and from the physical geographies of Northern spaces.[1] The North's past is more complicated than many of us realize, and, for better or worse, so is its present—and future.

NOTES

[1] Three of the four papers include the experiences of northern indigenous peoples, and Martin-Nielsen discusses the role of such people in contemporary debates at some length. We agree with Piper (2010) that historians who work on the North must continue to investigate the ways in which indigenous individuals and groups have shaped historical northern environments, especially given the predominance of southern and non-indigenous actors and perspectives in this literature to date.

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JANINA PRIEBE

The Arctic Scramble Revisited

The Greenland Consortium and the Imagined Future of Fisheries in 1905

ABSTRACT Among the numerous phrases that depict imagined futures in the North, the belligerent rhetoric of an *Arctic scramble* stands out. The notion of seizing opportunities continues to surface in current debates on resource exploration in the Arctic. This article places the present scramble in Greenland in a longer historical context. It analyses the arguments of a stakeholder group that applied in 1905 to the Danish Home Office for private access to Greenland's natural resources, and that hoped to introduce trade with the colony's products on a for-profit basis. The arguments of this initiative offer an insight into how the urgency to act was constructed through the authority of science. This paper suggests that the *scramble for the Arctic* lent a common framework to otherwise inconsistent narratives. Although the consortium's attempt to privatize Greenlandic fisheries and other resource industries was halted in 1906, their narratives highlighted perceived mismanagement by the colonial administration and anticipated and helped shape long-term changes in policy.

KEYWORDS Greenland, Arctic, narrative, natural resource management, fisheries

Introduction

In April 2013, Greenland's then recently appointed Prime Minister, Aleqa Hammond, stated:

> In the past we've relied mainly on fisheries which made the economy very fragile [...]. We need another way to stabilize the economy, and that will be mining. There's really no alternative to that. (Levring 2013.)

Hammond's comment feeds into a narrative of a scramble for the Arctic driven by a combination of resource prices and global warming. The scramble is an allusion to the phrase coined in late nineteenth-century Britain to depict the European powers' annexation of the African continent in their rush for land, resources and prestige. Today, this phrase is frequently used to invoke a competitive atmosphere in debates on natural resource exploitation in the North.

For now, however, there is still a considerable gap between mere accessibility and economic exploitation rates of conventional reserves in the Arctic (Young 2011: 188). In March 2013, Greenland Minerals and Energy Ltd., a major stakeholder in mineral assets, painted a bright future for Greenland in a company presentation. The Kvanefjeld project near the island's southern tip was placed on the top of the world's largest rare earth element deposits—China was thoughtfully excluded from the diagram—and among the five largest uranium reserves (Greenland Minerals and Energy Ltd. 2013: 8).

These hopeful visions of non-existent projects have fueled a narrative of abundant but underdeveloped resource stocks characterized as leading inevitably to development through mining. This narrative gained strength

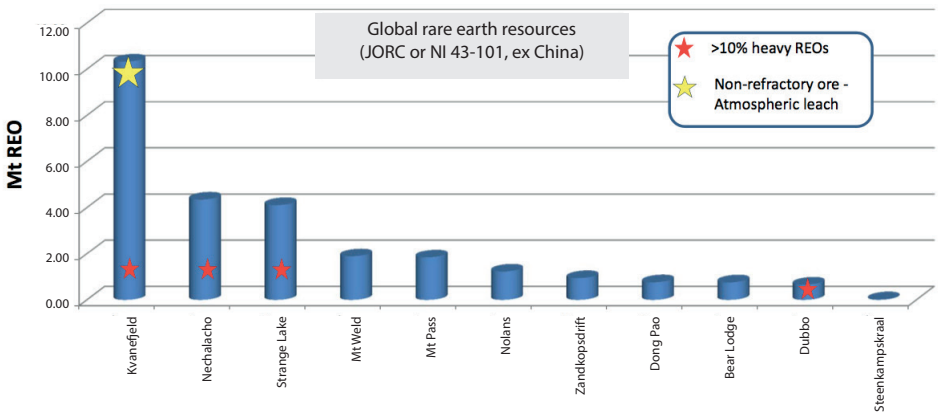

Fig. 1. Greenland Minerals and Energy's "peer comparison amongst emerging rare earth producers." Estimations of rare earth oxides (REO) in mega-tonnes (Mt). That the Kvanefjeld contains non-refractory ore, which is easier to process compared to refractory ore, is also highlighted graphically with a yellow star symbol and underlines the potential of this project visually (Greenland Minerals and Energy Ltd. 2013: 8).

when the Greenlandic parliament lifted its zero-tolerance policy towards uranium exploitation in a narrow vote half a year later (Nuttall 2013: 378).

In the early 1900s there was also extensive debate on the future of natural resource use in Greenland, at that time a colony under far stricter Danish rule, in which narratives of resource-based prosperity were similarly constructed to support the interests of particular commercial actors. At the start of the twentieth century Danish resource policy in Greenland was on the verge of a fundamental realignment (Hamilton & Lyster 2000: 198). Then, however, it was the prospect of a thriving fishing industry rather than mining that excited great interest in stakeholders. Commercialization and large-scale industrialization of fishing activities in Greenlandic waters had been a contentious issue for decades. The colonial administration's trading policy promoted the ideal of the "great hunter" (Mattox 1973: 81) and sought to conserve the Greenlanders' allegedly traditional lifestyle. Critical voices called for economic diversification since current colonial policy strongly favored successful seal hunters, who were able to profit from trading their products (Langgård 1999: 48). Advancing technology permitted increased fishing catches in much of the North Atlantic, while in Greenland equipment still mainly consisted of kayak and hand-lines (Andersen 1998: 147). Resource exploitation and development of Greenland's society were intrinsically linked within discussions of the colony's future. One narrative linked industrialization and free-market conditions to cultural and economic development in Greenland and thereby challenged the existence of the strict state monopoly, under Den Kongelige Grønlandske Handel, KGH ['The Royal Greenland Trading Department']. A group of individuals who described themselves as a consortium pushed that narrative by positioning themselves as stakeholders in a bright future driven by fisheries (Lidegaard 1990: 286). Their attempt to turn that vision into reality is the subject of this paper.

In his article on narrative in environmental history writing, "A Place for Stories," William Cronon "urge[s] upon environmental historians the task of telling not just stories about nature, but stories about stories about nature" (Cronon 1992: 1375). These stories are, he continues, both motivation and explanation for actions. In this paper, the terms story and narrative are used interchangeably. The arguments presented in the Greenland consortium's application adhere to a narrative structure. They become a story with a beginning, a climax and resolution or end (Roe 1989: 252). Besides being representations of power, stories are also a means to make sense of human relationships with the environment, incorporating epistemological assumptions that eventually define both questions and answers in a given realm (see also Bravo 2009: 260). What does Cronon's assumption mean for stories of the future of natural resource use in the Arctic?

Narratives of imagined futures include epistemologies as well as expectations. By analyzing New North stories of the twentieth century from an environmental historian's point of view, Andrew Stuhl has shown that "[s]ince the early 1900s, discourses and practices that appraised unfamiliar situations in the Arctic have accompanied attempts to cajole, conquer, civilize, consume, conserve, and capitalize upon the far north" (Stuhl 2013: 95). In these discourses, mastering natural resource use in the Arctic environment has been linked to claiming power to determine the future of territory, whether in the form of political or, as in the case of this paper, economic control. Moreover, Dag Avango *et al*. have shown that scientists took up a key role in articulating "a narrative that Sweden's right to define the [Svalbard] archipelago's future was linked to the fact that they had found coal on Spitsbergen" (Avango *et al*. 2013: 438). Narratives revolving around resource exploitation were central to claiming control over the future because they linked control over the environment to control of the physical space in political terms. While referring to Cronon's perspective, Stuhl emphasizes that the variety of imagined—and promoted—futures played a crucial role in transforming the Arctic throughout the twentieth century. Discourses produced practices, for instance, as Stuhl describes, when it came to resource development schemes or defense structures (Stuhl 2013: 95).

The scramble for the Arctic is one of many discourses in the North. Yet they share a focal point of promising prosperity and mastering resource use in a challenging environment as proof of rightfully aspired political or economic sovereignty. Understanding the construction of such stories can reveal the diversity of the stakes in resource use covered by the theatrical rhetoric of the Arctic scramble. The study presented in this paper, of an attempt over a century ago to construct Greenland as a space where a particular form of natural resource management would lead to prosperity, reveals that narratives of prosperous Arctic futures are neither new nor inevitable.

The Greenland Consortium

In 1905, the Danish Home Office was approached by four groups of applicants who sought private access to Greenland's resources (Sørensen 2007: 27). One of them consisted of a group of well-connected liberal and business-minded actors who joined forces to form a self-described "consortium," the name I will henceforth use to refer to the group. The consortium's application consisted of a number of documents[1] that together flesh out a narrative about a coming scramble for natural resources, one that reflected the hopes and fears of a particular group of actors but which in some ways resonates into the present. Although this attempt to weaken the Danish state's commercial monopoly in Greenland eventually failed, the consor-

tium's main suggestions were implemented in state-led initiatives in the following years and taken up in colonial directives in the following decades (Jensen 1907: 79).

The consortium's request was anything but modest. Its members applied for a private concession lasting 25 years for fishing and whaling within territorial waters along Greenland's west coast in addition to proposing sheep and fox farming, reindeer herding, and down feather production. The diverse professional backgrounds of the consortium's members reflected their plan to restructure the colony's economy while inseparably linking modernization and privatization. Through personal engagement and investments, the Danish Farmers' Bank (*Den Danske Landmandsbank*, *Hypotek- og Vexelbank i Kjøbenhavn*) and the East Asiatic Company (EAC, *Østasiatiske Kompagni*) were at the heart of a network that linked both industries and ambitions, closely interrelated by their worldwide ventures in shipping and extractive industries. The ten consortium members were backed by a range of leading figures in industry, finance and Copenhagen's cultural life in an additional document that confirmed their financial support. Moreover, this document contained a scientific assessment of the promising conditions for establishing industrialized fisheries in Greenland, signed on behalf of the government's consultant for fisheries.

Internal communication of the consortium's members with the director's office of the Danish Farmers' Bank suggests that Emil Raffael Glückstadt (1875–1923), a substantial player in the bank's management at that time, was the major initiator (Bro 1991: 238). His father (and managing director of the Farmers' Bank), Isak Glückstadt (1839–1910), was among the prominent supporters of the consortium. At the time of the consortium's application in 1905, the Farmers' Bank was the most important financier of private companies in Denmark's natural resource industries and one of the largest financial institutions in northern Europe (Nielsen 1983: 108). Another prominent consortium member was Ludvig Mylius-Erichsen (1872–1907), a renowned author and journalist for *Politiken*, a Copenhagen newspaper. As a central figure of the capital's cultural life he committed himself to the Greenlanders' political self-determination, bringing what he saw as the colonial system's weaknesses to the attention of a broader public (Thorleifsen 1999: 64). In 1906 he led an expedition to North-East Greenland that never returned. Among his scientific advisors in the planning phase were the geologist and botanical specialist Nikolaj E.K. Hartz (1867–1937) and the army captain Daniel Bruun (1856–1931) (Amdrup 1913: 38). In 1904, the latter had served as war correspondent in Manchuria during the Russo-Japanese War for *Berlingske Tidene*, another Copenhagen newspaper (Cedergreen Bech (ed.) 1979–1984). Hartz and Bruun were both members of the consortium in

1905. Other consortium members included Kristian Mikkelsen Vendsyssel, the founder of Vendsyssel Packing Co., a company that sold frozen fish from the United States to commercial smokehouses in Europe (Rosenkamp (ed.) 2008).

Rationality and Private Management

In the main application document, dated 9 October, 1905, the Greenland Consortium proposed to manage the whole process of producing and trading animal resources, and to administer the social insurance of the local work force on a private basis (A1 1905: 2). The applicants offered a comprehensive solution to a situation that was constructed as unsatisfactory and even carelessly neglected. The applicants claimed that they would improve economic conditions for the indigenous society and thereby facilitate cultural development. Their plan was a clear critique of the KGH, which had held a monopoly over natural resource exploitation and trade in Greenland for over a century and now presided over a territory marked by "economic depression and social and spiritual stagnation" (Mattox 1973: 48). The KGH's protectionist policy in the colony embodied a paternalistic and conservative approach that was increasingly questioned since liberal forces had gained political influence in Denmark's parliamentary system change of 1901 (Oldendow 1936: 76). The consortium framed its ultimate purpose as the more effective administration and exploitation of Greenland's natural resources. This argument linked the Greenlandic population's social welfare directly to its economic success:

> As argument for granting the concession we would like to state that our primary objective is twofold: partly, it is to develop such sources of relief that have not or only to a limited extent been put to use; and partly, to develop the native population's economic situation and, through that, [...] improve conditions for a cultural upswing. (A1 1905: 2.)

The premise for the argumentation was that denying economic productivity meant disregarding social well-being. Thereby, the consortium refuted the KGH's argument that isolating the colony from economic development was actually beneficial to the indigenous population (Bro 1991: 246).

Developing fisheries of various species was presented as being of primary importance in the consortium's application. Practical details concerning implementation followed: the consortium pointed out that it had access to vessels equipped with on-board deep-freeze facilities that would ensure that the fish was brought fresh to the market in its best condition. While a draft of the application mentions merely cooling facilities, the final version

explicitly refers to deep-freezing. The latter also lacks the draft's straightforward critique. The KGH was openly accused of mismanagement in the draft: "All the fish is salted down on the spot so that in Denmark, after bleeding decreased its quality, it is sold for smoking" (A1.B: 2). This sentence does not appear in the final version, which instead elaborated on how the consortium would be able to maintain the quality of the fish during transport:

> [W]e, the undersigned concession applicants, will see to the greatest extent possible that the fish is brought fresh in frozen condition to market [by transporting it] in ice [...] and to bring the products to the Danish and foreign Market. (A1 1905: 1.)

The final application underlined the consortium's plan to improve coastal infrastructure by means of establishing modern facilities, such as deep-freeze warehouses, at all major fishing stations along the western coast.

Yet another sentence only appears in the draft and suggests that criticism was held back carefully in the final version:

> [T]he trade in fish, as it had been carried out until a couple of years ago by Danish officials in Greenland and, thereafter, by the Royal Trade Department, is both inefficient and of little value for the Greenlanders. (A1.B: 1.)

In the above-cited quotation from the draft, the Danish adjective used is *urationel*, which implies the notion of something being both impractical and incomprehensible by means of reason. It also relates to waste and thereby exceeds the meaning of the obvious literal translation 'irrational' (ODS). The term illustrates how the consortium's plans responded to the deeply rooted assumption that the KGH's policy led not only to inefficient resource use but also, in fact, the waste of resources. During the nineteenth century, it was common practice among Danish civil servants to trade fish privately for their own profit. Only in 1903 were Arctic char (called *laks* or *lax* in the consortium's application)[2] and Greenland halibut added to the list of export products under monopoly restriction. Cod, which would become an icon of thriving fishing industries in the North Atlantic, and eventually of their dramatic collapse in the 1960s, was added in 1910 (Strøm Tejsen 1977: 462). Before that, only the cod's liver had been an official export item (Mattox 1973: 82). Like exported seal blubber, liver was processed for train oil. It was used, amongst other purposes, for heating and as ingredient for industrial applications such as lacquer. The growing use of synthetic substances and palm oil, however, had already affected market prices for

animal train oil and was a major cause of deficit for the KGH's accounts at the turn of the century (Strøm Tejsen 1977: 464).

Shortcomings in Denmark's colonial trading policy had provoked critique throughout the late nineteenth century. The wife of a Danish civil servant stationed in Greenland complained in a letter to her mother about a strange, wasteful habit: Greenlanders extracted the cod's liver and sold it to the trading stations while the high-quality fish itself was not used. Around the same time, a missionary observed this practice and stated that it "caused a great part of it [the catch] to be left to rot" (Marquardt 1999: 29). Critique spread further when cases of fraud and misappropriation of Greenlandic products by KGH staff were revealed in 1902. Journalists involved in this disclosure would shortly after become important members of the consortium (Bro 1991: 230). In its application, the consortium connected efficient resource use to rationality and sound decision-making. This narrative presented colonial trade and exploitation policy as wasteful, that is, inefficient, and thus inherently irrational: "The consortium established by the applicants [...] could much better than a monopolized state business [...] provide beneficial marketing for the fish" (A1 1905: 2). Knowledge of how to place products in profitable markets was, in the consortium's argumentation, the expertise of a private initiative, not the state. It was a clear sign that the stagnation associated with the KGH's administration could be transformed into a boom if only power were handed to the consortium.

Parallels with Mining

In the application's concluding appeal the consortium emphasized the state's positive experience with privatizing branches of resource use in the past, particularly mining. Some of those initiatives were now filling the government's coffers with new sources of income:

> In view of the fact that the government and the parliament have already granted the Cryolite Mining and Trading Company a concession for operating the cryolite mine at Ivigtut [today known as Ivittuut], and now, in 1903, have granted the merchant J. Bernburg a twenty-year concession for mining activities in Greenland under government supervision including a share of the net earnings for the state's treasury, we, the applicants, cherish the hope that a concession may be granted under similar conditions. (A1 1905: 3.)

Julius Bernburg (1840–1911) was a major figure in exports and specialized in agricultural products. As of 1 January, 1904, the Home Office granted Bernburg a concession for extraction of copper, lead, graphite, asbestos and mica in all of western Greenland (with the exception of the area surrounding

Fig. 2. Map showing western Greenland c. 1905, with the main Danish settlements, and Ivigtut. Map created, and published, with permission by Hans van der Maarel.

Ivigtut). An expedition to assess the potential for mining there, financed by the Danish Farmers' Bank, had been carried out in the fall of 1903 (A6 1904). Moreover, Bernburg and Isak Glückstadt had had another common goal since the 1880s: building up the Copenhagen Free Port, a harbor transfer site with special customs regulations that was supposed to boost Copenhagen's position as a hub for international trade. The Free Port opened in 1894 and Bernburg served on the Free Port Corporation's first steering board until 1911. In 1891, the corporation had been transformed to a joint stock corporation under the leadership of the Danish Farmers' Bank, which held the majority of shares (Schovelin 1921: 365–366). Hans Niels Andersen, another prominent patron of the consortium, was also a committed supporter of the Free Port. He helped draw up a strategy for using the port to secure Denmark's future position in an accelerating and globally connected economy (A4 1902).

Bernburg's concession excluded the area around Ivigtut that was already

occupied by the Cryolite Mining and Trading Company (*Kryolith Mine- og Handelsselskabet*), mentioned as a positive example of privatizing resource exploitation in the consortium's application. The company held a license to extract cryolite in Ivigtut as a private venture—the only one in Greenland before Bernburg's concession was granted. Cryolite, a rare mineral, was used in aluminum production but it still occupied a rather marginal position in metal industries. The Cryolite Mining and Trading Company's major financier was Carl Frederik Tietgen (1829–1901), director of Privatbanken, Denmark's major financial institute besides the Danish Farmers' Bank and Handelsbanken. When Tietgen co-founded the mining company in 1866 he was confident that cryolite would be essential to future industries. The mineral was used in both of the only two known production processes for aluminum at the time. Tietgen assumed that cryolite trade was "on the verge of a boom" (Kragh 1995: 294) in the near future.

Generally, however, Tietgen's bank policy had not followed the late nineteenth-century trend of extensive investments in natural resource industries and industrial stock market companies (Nielsen 1983: 106). This was in contrast to the Farmers' Bank, led by Glückstadt, who was ten years younger than Tietgen. Several years earlier, the two men's paths had crossed at an occasion that was emblematic of their different positions. In 1892, H.N. Andersen approached the two bank directors in search of financial support for his vision of a shipping company that would connect South East Asia to Europe. Tietgen did not see the potential of Andersen's idea and refused to invest in his risky venture. Instead, it was Isak Glückstadt who became major financier, creative mind and co-founder of the EAC in 1897 (Ellemose 2007: 39). Andersen, however, would be remembered as the company's charismatic founder (Eggers-Lura 1993: 185). Only a few years later, both would seek to channel the synergy of their ventures in the consortium, taking the same narrative of a prosperous future driven by private economic initiative to a hitherto closed colony.

Scientific Recommendations

Then as now, narratives concerning the governance of natural resources in Greenland drew upon the authority of science. The consortium repeatedly emphasized that their concern was a matter of great urgency by referring to the decline of sea mammals in the coastal region as the greatest danger to the colony's economy. This assertion was by no means undisputed (Bendixen 1922: 20), but it was still presented as common knowledge:

> It is a matter of fact that the marine animals partly are in decline along

> the Greenland coast, and partly are taking themselves further and further away from the inhabited areas. It is acknowledged also by all Greenland experts that the wealth of the Greenlanders is through no fault of their own constantly decreasing. (A1 1905: 1–2.)

The consortium asserted that the Greenlanders' wealth was decreasing because marine animals were fewer in numbers and harder to find near settlements. Again, the draft contained a slightly sharper way of bringing the case forward. Instead of Greenland experts (*Grønlandskyndige*), the draft stated that even the Trading Department's directorate (*Handelsdirektoratet*) had acknowledged changes in marine animal populations.

In contrast to the consortium's claim, however, the decline of those animals (particularly seals, in this context) was not accepted common knowledge. Even two decades later, a professor of zoology at Copenhagen University and a former governor of South Greenland would engage in an open dispute over whether seal populations had been overexploited at the turn of the twentieth century (Bendixen 1927: 76). In the 1980s, the same question arose once more just when Greenland's economy was turning to shrimp fisheries as a result of depleted fish stocks (Hamilton *et al*. 2003: 274). Again, it was debated whether Greenland's economic transition in the early twentieth century was caused by environmental necessities, that is, by declining numbers of seals due to a warming climate (Boisen & Nielsen 1982: 126). Eventually, strict climatic determinism was refuted conclusively in the course of this debate's revival (Sørensen 1982; Smidt 1983). In 1905, the consortium phrased declining numbers of seals and abundant fish stocks in their argumentation as common knowledge that was, moreover, acknowledged by "Greenland experts." The label of accepted common knowledge implied that opposing views appeared irrational. Again, this argument emphasized the consortium's critique of the current colonial policy that was allegedly not based on rational decisions.

Shortly after the consortium's main application of October 1905, a letter of support, including a scientific assessment, was submitted to the Home Office. Although not formally part of the consortium, those who signed the testimonial demonstrated the high-level support it enjoyed from scientific as well as business figures. Notably, the letter of support was signed by Christian Frederik Drechsel (1854–1927) in his capacity as the government's consultant on fisheries. Even if the decline in marine resources could be taken as a safely established fact, Drechsel pointed to the continued importance of advancing knowledge regarding the abundance of fish stocks in Greenlandic waters since only this would allow for a successful fishing industry in the future. Lack of scientific knowledge of the environ-

ment had, in the supporters' opinion, prevented further development to date. Drechsel pointed to the thriving Arctic char fisheries in American waters to illustrate the absurd situation that resulted from this shortcoming: "[N]owadays Arctic char is transported from the western parts of America to Europe, including to Denmark, to be smoked and processed" (A3 1905: 1–2).

Drechsel's statement depicted fisheries as a sector where national economies were competing, yet at the same time becoming tied together. Drechsel had also been recently appointed the Danish representative to the International Council for the Exploration of the Sea (ICES), an international marine science organization founded in 1902. From the beginnings ICES had a "dual identity" (Rozwadowski 2004: 46). On the one hand, the council was devoted to advancing hydrographic and biological research related to fisheries and to understanding the rising problem of overfishing. On the other hand, it acted as a consultant to governments regarding "how to best manage fisheries [...] and how to best promote new fisheries in underutilized areas" (Rozwadowski 2004: 46). The link between knowledge and rational management could hardly have been clearer.

Drechsel's colleagues in Denmark included the marine zoologist C.G. Johannes Petersen (1860–1928) whose work regarding plaice tagging experiment would soon become well respected. On Drechsel's initiative, Petersen became director of the Biological Station (*Dansk Biologisk Station*), Denmark's national institute for marine research, in 1889 (Rozwadowski 2002: 51). Petersen too was involved with ICES as a member of the organization's special working group on overfishing. He cautioned against the consequences of extensive trawl fisheries (see Petersen 1903), and, in November 1905, submitted a one-page scientific assessment as a supplement to the consortium's application. Despite his caution elsewhere, he urged extending fishing activities in Greenland, where he saw ample opportunity given the right approach: "Every effort to exploit these fisheries has my greatest sympathy" (A2 1905). Petersen assumed that an Arctic char fishery would be especially promising since it was inexpensive to establish, but the catch would still fetch high market prices. This recommendation was clearly based on economic considerations. Accordingly, Petersen left the final question of the venture's profitability to experienced traders: "[W]hether this pays for the high transport costs and other expenses can be justified and a big enough market found, I leave to the fish traders to decide" (A2 1905).

Petersen concluded that in order to benefit from these opportunities private actors had to be put in charge of extending Greenland's fishing industry. He predicted bright prospects from a scientific point of view, provided that the industrialization of fisheries was a private instead of a state-led project. Petersen's reputation as director of the Biological Station added

to the credibility of an assessment that, nevertheless, clearly derived from economics as much as biology. His status as a scientist lent authority to the consortium's narrative. The connotation of the efficient, objective rationality of science provided moral superiority in view of the fraud committed by the colonial administration's staff and the waste of resources as a consequence of mismanagement and misguided policy (Bro 1991: 230).

On the one hand, the consortium constructed efficiency as a means to develop the Greenlanders' culture under the paradigm of productivity (A1 1905: 2). But on the other hand, the description of future competition for fish stocks in Greenland's coastal waters suggested that wasting or not exploiting these assets at all left them vulnerable to foreign powers. In the consortium's narrative, the KGH's civil servants, who were accused of misappropriating Greenlandic products, thus failed either to promote the development of Greenland for the sake of its inhabitants or to secure Denmark's sovereignty over resources on Greenland's territory. Drechsel and Petersen did not only add to the credibility of the consortium's narrative. Their assessment as well as their reputation as scientists was crucial to constructing the consortium's vision of economic prosperity as being based on rational principles of efficiency.

Rivalry and Rejection

The consortium's business plan, titled "Planer for fiskeriet m.m i Grønland" ['Plans for fisheries etcetera in Greenland'], delineates how the group planned to implement extensive exploitation of Greenland's living resources, primarily fisheries. It opens with a dramatic portrayal of the near future if no immediate action was taken to secure the colony's own resource stocks:

> [I]t will hardly be long before American fishermen will, again, initiate an attack on the Greenlandic fishing grounds; as is known, trawling has only been started on the American East Coast last year; as soon as fisheries there are ruined in a few years' time, there is redoubled risk that they will turn to the Greenlandic fishing grounds—especially if vessels under Danish flag have not occupied these territories. (A4 1905: 1.)

In view of the recently spreading use of trawlers along the American coasts, the consortium was careful to remind Danish public authorities of potent competitors in Greenlandic waters, in the context of Petersen's valuation of the fisheries. Just as Drechsel had done in the consortium's letter of support, Petersen called attention to the thriving Arctic char fisheries in the US. His reference to exports to Europe included criticism of the colonial administration for failing to exploit either the fish stocks or the markets for them. The consortium would, by contrast, promote trade with frozen

fish to Russia, which was seen as a strategically important market. As H.N. Andersen had outlined in an internal strategy paper of September 1902 for the Copenhagen Free Port Corporation, advancement of communication and transport technologies affected the world's present economic order (A5 1902: 4). In this paper, Andersen warned that Denmark's strength in the agricultural sector would soon be diminished. Improved communication within the vast Russian Empire, as he assumed, would soon boost its competitiveness on the market for agricultural products. Thus, Andersen saw Denmark's future in trade. The Greenland Consortium and its supporters were closely tied to the private Free Port Corporation, as steering board members or in managing positions. Drechsel, who had signed his scientific assessment on behalf of the consortium's supporters, was the Corporation's current director. In view of Andersen's strategy paper, the application of 1905 can be read as a narrative evoking an atmosphere of competition for resources while also responding to fear of a growing rivalry for market shares. Considering the consortium members' personal and economic ties, competition for resources could plausibly also be read as a proxy for competition for market shares in international commodity trade.

On behalf of the Greenland Consortium, Mylius-Erichsen had met the Minister of the Interior, Sigurd Berg, on 2 November, 1905 to elaborate on the application. As Mylius-Erichsen reported, Berg clearly signaled his personal approval. Berg had already turned down three other initiatives in favor of the consortium (A7 1905: 2). The historian Daniel Thorleifsen confirms that the government was indeed open to allowing capitalist interests access to Greenland's natural resources at that point (Thorleifsen 1999: 66). However, the Greenland Administration and KGH held a gatekeeper position. The application of the Greenland Consortium was eventually rejected. As Henning Bro describes in his article on private capital in Greenland, the Danish authorities feared that a too powerful private consortium could develop into a "state within a state" (Bro 1991: 242). Thorleifsen states that "the protectionist principle and the Danish state's paternalistic colonial policy in Greenland which was permeated with social conservatism throughout the nineteenth century" (Thorleifsen 1999: 66) eventually prevented privatization and liberalization in the colony's resource industries at that time.

Based on the promising future outlined by the consortium, the professor of zoology Adolf Severin Jensen (1866–1953), who would later engage in a reviving debate about depleting seal populations in the 1920s, was ordered to conduct fishing trials on the government's behalf, supported by the KGH. Jensen's task was to assess prospects for a large-scale fishing industry (Jensen 1907: 79). In the following years, reforms changed resource use in the colony fundamentally and eventually shifted towards the extensive

commercialization of fishing, but under the state's control (Sørensen 1983: 34–38).

Conclusion

The application of the Greenland Consortium articulated major arguments in a discourse that criticized Danish colonial policy in the early twentieth century. It constructed a powerful narrative that drew on different sources of expertise. Knowledge of the current, allegedly unsatisfying situation in Greenland was referred to as common understanding, leaving aside opposing views. The scientific assessment of the fisheries' future potential was a pillar of the consortium's application, interwoven throughout with economic policy recommendations. Drechsel presented his assessment in the same document that confirmed the consortium's financial backing by key figures of Denmark's business and finance sector.

The construction of this narrative reveals the diversity of the set of tools that the consortium used to appeal to the authorities. Its argument for a rapid industrialization of fisheries on a private basis consisted of two key elements. Firstly, there was the pervading emphasis on rational and efficient methods: existing policies were presented as unsustainable and inefficient, with an implicit critique of colonial protectionism as incapable of ever surmounting these problems. Secondly, lack of scientific knowledge was interpreted as scientific uncertainty that demanded taking sides rather than more data. The consortium's claim that its interpretation was "common knowledge" became a powerful argument in favor of its plan. The scramble rhetoric of international rivalry and unique opportunities both obscured inconsistencies and lent a common dynamic to the group's arguments. It also created a pressing urgency to act. As Cronon points out, an ambiguous narrative can incorporate responses to diffuse, yet common fears and promises of a bright future, while still conveying unambiguous meaning: the "[n]arrative succeeds to the extent that it hides the discontinuities, ellipses, and contradictory experiences that would undermine the intended meaning of its story" (Cronon 1992: 1349–1350).

Today, the belligerent rhetoric of the Arctic scramble may have lost its persuasiveness for scholars, yet it remains a pervading theme in public discourse. The vision of the Greenland Consortium of 1905 shows that the scenario of a scramble for Arctic resources was, even over a hundred years ago, seen as a powerful argument by a commercial and cultural elite. Key stakeholders in the consortium, like H.N. Andersen, were committed to developing Copenhagen's Free Port into a hub of international trade. Their claim that Greenland could (again) be turned into a profitable space was based on the argument that they had the access and technological means to

place Greenlandic products on profitable markets (A1 1905: 2). The consortium's vision for Greenland also located Copenhagen at the center of the stakeholders' world-spanning ventures in natural resource industries, thus changing the geography of economic linkages fundamentally.

Researchers dealing with the geopolitical importance of Arctic resources today suggest that "[c]loser empirical scrutiny indicates that neorealist expectations of a geopolitical rush for Arctic resources are unrealistic" (Keil 2013: 19). Still, the scramble succeeds as a narrative of seizing opportunities. In the current debate on the future of uranium and rare earth exploitation, the government's narrative places Greenland, once again, on the verge of a new era of resource use. The past reliance on fisheries is directly linked to future prospects of mining. This narrative is fueled by imagined futures in the shape of promises and expectations that eventually transformed into a (possibly) momentous parliamentary decision, creating a new reality. For now, this reality is merely the end of a zero-tolerance policy towards uranium exploitation and the hope of exploring one of the earth's largest mineral reserves. This transformation of a narrative centered on imagined futures illustrates the continuing importance of stories told under the rubric of an Arctic scramble. They create a straight line between past, present and future.

As the policy analyst Emery Roe suggests, cogent future scenarios are shaped in a narrative structure, starting with a suggested present cause resulting in future developments (Roe 1989: 252). The consortium's narrative of 1905 did not only identify present problems by relating them to past developments. It was also a claim of expertise to control the future. In the article "Reconfiguring environmental expertise" of 2013, Sverker Sörlin describes how the environmental, that is, an "integrated and future-oriented [perspective] [...] with human agency at the core" (Sörlin 2013: 19), emerged in the 1920s and became central to various fields of expertise. From that perspective, the Greenland Consortium illustrates the broad variety of actors that began claiming knowledge of the future environment in the early twentieth century. Scientists as well as business and financial experts claimed to be able to predict and control environmental factors in the future of the colony's natural resource industries.

The background theme of an Arctic scramble made the consortium's claims appear even more urgent while also accommodating a broad range of narratives. As today's uranium debate in Greenland suggests, this theme continues to lend coherence to an inconsistent conglomerate of imaginations of an Arctic future, despite a century of fundamental changes in all aspects of society and environment. Rather than being a consistent future scenario itself the Arctic scramble had and still has the "promethean power of producing futures" (Adam & Groves 2007: 78).

NOTES

[1] All sources referred to in this paper are copies of the application documents belonging to the Danish Farmers' Bank located in the Danish National Business Archives, Aarhus. All quotations from these sources in this article are translated by me from Danish.

[2] Among others, William G. Mattox has pointed out that the term *laks* or *lax* in Danish sources of the early twentieth century refers to Arctic char and not, as the literal translation might suggest, to salmon (see Mattox 1973: 38).

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Media Environments

Icebergs/Screens/History

ABSTRACT Icebergs, at present, are living a second life on screens. While they are one of the natural world's most photogenic objects, icebergs are also subject to modes of representation through parametric modeling applications. The purpose of this digital life on screens is largely confined to determining how, and under what conditions, icebergs can be made a source of potable water for the planet. Yet icebergs have a story to tell about the epistemological and economic production of northern natural resources. Distinct institutional actors, from oceanographers and military engineers to Saudi royalty and software design companies, have sought to control and come to know icebergs through specific practices of modeling. I argue that the representation of icebergs is a contingent practice that has often been bound up with processes of commodification. To come to know icebergs we have to come to know how these quintessentially polar phenomena have been represented and commodified, across the twentieth century and at a significant remove from the highest latitudes of the planet. The increasing pace of northern development, with natural resources at the vanguard of corporate and governmental incursions, signals the emergence of "media environments" that are extending the representation of (and control over) natural phenomena through a series of media technologies, from 3D modeling applications and collections of satellite data to virtual reality environments and predictive algorithms.

KEYWORDS icebergs, natural resources, water, modeling, media environments

Introduction

The white berg lies still on the grey-blue water. Its tabular mass is hard to determine, though we are flying in over its craggy peak. Up close, the ice is a light blue, transparent, a fragile surface holding itself together. With a quick turn of the wrist, the iceberg spins on its axis, freely rotating like a top. Welcome to the world of 3D modeling.

Icebergs, at present, are living a second life on screens. While they are, without a doubt, one of the natural world's most photogenic objects, icebergs are also subject to representation through parametric modeling applications. The purpose of this digital life on screens is largely confined to determining how, and under what conditions, icebergs can be made a source of potable water for the planet. While this is a practice with a rather long history, going back millennia to indigenous forms of water provision, for metropolitan, Western social formations it dates back to the middle of the nineteenth century and the early industrial conversion of icebergs into water destined for human purposes (Cruikshank 2005; Gosnell 2005; Pyne 1986). Icebergs, and the potential they hold as a source of water for the dry and drought-ridden regions of the world, constitute a little-known touchstone in historical and contemporary debates on the ethical and ecological limits of the extractive industries. For well over a century, actors have sought to move icebergs from their points of origin, calving off of glaciers and ice sheets in both the Arctic and Antarctic, to lucrative markets in Chile, California, and Saudi Arabia, amongst other countries.

In this article, I want to make the case that environmental historians, and northernists in particular, can benefit from thinking further about how icebergs have a story to tell about the epistemological and economic production of northern natural resources. I show how distinct institutional actors, from oceanographers and military engineers to Saudi royalty and software design companies, have sought to control and come to know icebergs through diverse practices of modeling. The representation of icebergs is a contingent practice that has often been bound up with processes of commodification. To come to know icebergs we have to come to know how these quintessentially polar phenomena have been represented and commodified, across the twentieth century and at a significant remove from the highest latitudes of the planet. Once seen as emergent natural resources subject to diverse modes of southern corporate and governmental control, their very status as site-specific polar objects is challenged.

Most scholars would agree that we should not take the politics and power dynamics of our objects of study for granted. Yet little attention has been paid to the ways in which distinct representational tools have historically constructed Northern environments (and their phenomena) for

the purposes of extraction. It is through these very interfaces that certain iterations of icebergs get "made." Environmental historians are particularly well placed to read through the layers of signification contained in such representations. In my reading, northern environments, and icebergs in particular, extend across their instantiations in various media, from paper diagrams to integrated digital drift models. By extending our considerations of what constitutes the environment (Biggs 2014), we as historians can begin to intervene in these concrete forms of mediated decision-making being undertaken by institutional, corporate, and government actors intent upon regulating and interacting with the natural world. The increasing pace of northern development, with natural resources at the vanguard of corporate and governmental incursions, signals the emergence of what could be thought of as "media environments" that are extending the representation of (and control over) natural phenomena through a series of technologies, from 3D modeling applications and collections of satellite data to virtual reality environments and predictive algorithms.

The work of Paul Edwards clarifies how competing representational claims being made about "the environment" are bound up with the concrete worlds of computer simulation and satellite data sets, amongst a host of other media technologies that shape the parameters of the sensible, and, by extension, the factually given (Winsberg 1999; Edwards 2010). Icebergs and the media environments of which they are a part constitute important if emergent elements for the scholarly practices of environmental historians. They are of particular relevance for Northern environmental history because, to borrow a phrase from Julie Cruikshank (2001: 377–378), the Arctic and Antarctic are zones of amplification—spaces where anthropogenic environmental change is particularly apparent. As a result, they can seem to be perpetually undergoing processes of forecasting, prediction, and calculation, all of which project these supposedly remote environments into media(ted) and digital environments of the future.

Media environments are co-produced with institutional and corporate decision-making, the impacts of emerging and contentious resource industries, and anthropogenic environmental change.[1] In contexts wherein data sets, modeling, and "parametrization" often narrow the group of actors involved in making decisions that affect environmental outcomes (Edwards 2001: 64), models and model-making processes are mobile forms of semiosis. As some of the episodes I recount below show, such models deploy visualization and projection in order to mobilize public opinion, further geopolitical interests, or raise funds for schemes on the borderlands of ethical and ecological responsibility.

It would seem that media environments take their diverse points of de-

parture through interfaces that look to the future, such as forecasted melt rates and predicted transportation routes. Yet the choice of what parameters and characteristics to employ within a media environment is far from self-evident. Analyzing why icebergs have been represented on screens in the way they have reveals much about the actors who construct these very representations. Much as Edwards provides "the climate" with its data-driven past (Edwards 2010), so too can icebergs reveal something about past modes of calculation, epistemologies of extraction, and practices of visualization. "Modern 4D assimilation systems," as Edwards writes, "literally synthesize global data, constrained but not determined by observations" (Edwards 2010: 433). The drive to generate truly accurate *global* data, derived and adopted from the established practices of meteorologists and their associated institutional settings (Harper 2008: 226), can, in part, be read through current corporate efforts to forecast the potential tow-paths of North Atlantic icebergs. The creation of icebergs as objects of potential commercial exploitation is linked to their representation as objects with controllable, predictable characteristics. This operation, running from the 1940s to the present day, is also part of a broader post-war turn towards quantification and quantifiable models in the natural and physical as well as the human sciences (Edwards 1996; Porter 1996; Edwards 2010). Northern environments, and polar phenomena such as icebergs, have also increasingly fallen within the ambit of a scaled-up view of high modernism and its focus on technological megaprojects, which have both enabled and eventually led to the commodification of natural resources on ever-larger scales in the second half of the twentieth century (Scott 1998). To return to Cruikshank, icebergs can indeed be objects of amplification for Northernists: that is, both very concrete and measurable markers (or predictive models) of anthropogenic environmental change, and equally mobile, metaphorical, and generative emblems of the meeting point between a warming atmosphere and ice.

In a first section, "Cold Regions, Research, Laboratory," I examine some of the earliest schemes to transport icebergs from the Arctic and Antarctic to the dry regions of the world, with proposals originating from at such diverse institutional sites as the Scripps Institution of Oceanography and the RAND Corporation. In the next section, "3D," I consider the more recent case of French engineer Georges Mougin, who undertook a series of modeling experiments beginning in the 1970s to test the economic and physical feasibility of towing an iceberg from Antarctica to Saudi Arabia. Mougin's plan has been taken up recently by Dassault Systèmes, a major player in the world of corporate digital simulations, who have rechristened it "icedream" (Dassault Systèmes n.d.*a*) in order to concretize its feasibility through to the deployment of an array of environmental modeling technologies. While

each section offers its own media-derived story of how icebergs have been documented, managed, and deployed as objects of human concern, they seek to collectively produce insight into the ways in which icebergs have become emblematic phenomena through which engineers and scientists are forecasting a future with fewer and more costly sources of potable water.

Cold Regions, Research, Laboratory

In the 1940s, climate change was generally a distant concept to be lived by other times, places, and peoples. For John D. Isaacs, a newly hired polymath and sometime oceanographer at the Scripps Institution of Oceanography in La Jolla, California, melting ice could be viewed simply as a temperature problem to be solved rather than a weightier marker of widespread ecological change. Within today's oceanographic community, Isaacs is considered an intriguing outlier. He was largely self-taught as an oceanographer, with his only formal degree being a bachelor of science obtained in 1931. Yet by the time of his death in 1980, he was a member of the National Academy of Sciences, the National Academy of Engineering, and the American Academy of Arts and Sciences (Bascom 1983). Prior to studying ocean phenomena, he had experienced them as a sailor and fisherman off the coast of Oregon. It was during his first seminar at Scripps, in 1949, that he put forward the seemingly outlandish idea of towing an Antarctic iceberg to southern California in order to address the state's persistent water shortages, notably for irrigation purposes (Behrman & Isaacs 1992: 3–4).

At Scripps, Isaacs undertook his early speculative work on the transportation of ice under the directorship of Harald Ulrik Sverdrup, one of the founders of modern physical oceanography. Sverdrup, Martin Johnson, and Richard Fleming's *The Oceans. Their Physics, Chemistry, and General Biology*, published in 1942, was an early attempt at a taxonomy and synthesis of the world's oceans. It was an ambitious book, and it marked Sverdrup's aim of importing a rigorous physical oceanography to Scripps, as well as a wide–ranging research agenda that was to focus its attention on the California Current and to undertake the first comprehensive hydrographic survey of the Gulf of California (Nierenberg 1996: 349). The relational possibilities of scale could allow Isaacs and others to draw points of connection between seemingly disparate geographic locations, meteorological events, and ocean phenomena. Moreover, the involvement of Sverdrup and Isaacs, amongst other oceanographers and meteorologists, in the American war effort provided them with the ability to produce "tactical intelligence" that, after the war's end, would continue to resonate as a goal of the American government when it came to managing its hydrographic resources (Seiwell 1947: 202).

Today Isaacs's scheme might seem an outlandish piece of geo-engineering,

yet at the time it was perceived as a practical, economical solution to the problem of water shortage. With costly and soon to be controversial desalination and aqueduct projects underway in California (Reisner 1986), the latter already affecting the Colorado River, Isaacs's idea fit in with his broader view of the ocean as an instructive ecology. He argued that "the totality of the interaction of the continents, the sediments, the winds, the weather, the water, organisms, chemistry, atmosphere, all of it," was important and needed to be taken into account when making incursions into the environment (Behrman & Isaacs 1992: 19). Isaacs believed in the episodic and large-scale event that had the power to change the course of the natural world, deeming many of his contemporaries' ideas about nature "unnatural" in their lack of interdependence with meteorological, climatological, and anthropogenic causation. He approached nature as a "highly variable system" that above all else needed to be understood in its stochastic mode, without the benefit of human security (Behrman & Isaacs 1992: 41). As such, it was perhaps fitting that it was Isaacs who would revive and rescale the idea of using Antarctic icebergs as a source of fresh water. His biographer, Daniel Behrman, deems this Isaacs's best-known scheme, and throughout the 1950s and 1960s it would circulate around the world.

Isaacs's iceberg scheme benefited from the prevailing faith that American governing institutions held in the technical capacities of resource provision, notably when it came to water. With "the West," and the Colorado River in particular, holding emblematic positions in this technocratic imaginary (Hundley 2009), Isaacs came upon the idea while thinking through the problem of how to go about moving large quantities of water from one location to another. More specifically, he was concerned with evaluating the potential cost of an underwater pipeline connecting the Columbia River to southern California. He soon realized that once the container was optimized, taking into account such factors as distance and the increased cost of width of the pipe, he had obtained an object with dimensions approaching that of a tabular Antarctic iceberg (Behrman & Isaacs 1992: 50). Over the next decade, the idea would occasionally get picked up and dropped by science reporters and the press at large. In a 1956 interview with the *Los Angeles Examiner*, Isaacs worked through the variables involved in towing an Antarctic iceberg to San Clemente Island near San Diego, factoring in the power requirements needed to move the berg along (the equivalent of one, or, possibly, two atomic bombs, in his estimation, using the energy currency of his time) (Behrman & Isaacs 1992: 51).

At Scripps Isaacs experimented with various wrapping materials, largely plastics, to slow the melting of a berg. He worked with six-hundred-pound ice blocks, and observed how the berg would change shape over the course

of the towing, assuming the outline of a ship's hull. As such, he recommended that the berg not be wrapped from the outset so that it could take on this more hydrodynamic shape. As with many of Isaacs's thought experiment-like ideas—so attractive in their profound impact and simplicity that they attracted the interest of the *Saturday Evening Post*, *Reader's Digest*, the *Encyclopedia Britannica Yearbook*, and *Life*'s book publication series—he had merely prepared the ground for others to investigate it in further detail. This idea was also circulating across a state and, to some extent, a country grappling with recurring meteorological crises and a waning belief in the self-regulation of the earth's own ecological capabilities, with California a dry marker of a nascent "hydraulic society" that was constantly seeking after ready-made solutions to its chronic water shortages (Hundley 2001). Isaacs's packaging of the scheme as popular, amenably readable, cost-effective, and, above all else, feasible, laid the discursive groundwork for his seemingly outlandish idea to travel from the popular press to governmental and institutional interests. By describing the plan in such detail and by publicizing his role as author, Isaacs kept it alive and in the public eye. Yet Isaacs's framing of the project was also in line with the prevailing aim of expanding the "functional approach" to natural resource theory, pioneered by Erich Zimmerman's *World Resources and Industries* (1933). Isaacs was to some extent discursively drawing out Antarctic icebergs, shaping their popular and public representation so as to suggest that they were latent (yet available) resources for human consumption. He was making a persuasive case for the American public to believe in.

By the late 1960s, the idea held the interest of Wilford F. Weeks of the U.S. Army Cold Regions Research Laboratory at Hanover, New Hampshire, and William J. Campbell of the U.S. Geological Survey. They approached the problem of increasing water scarcity with the rationale that since 85 per cent of the world's fresh water was held in the form of ice in the Antarctic and Greenland, it could follow that this ice should act as a reserve to be tapped if the appropriate technical and economic conditions could be met (Weeks & Campbell 1973*b*). An object from a polar environment could thus become a quantifiable (and controllable) commodity for global economic consumption. Weeks and Campbell's article in the *Journal of Glaciology* (1973), republished in less technical detail in the *Bulletin of the Atomic Scientists* in May of that year, set out to demonstrate that the towing of icebergs to select locations in the Southern Hemisphere was both feasible and desirable (with the latter article coming below a photograph of three icebreakers pushing a tabular Antarctic iceberg near McMurdo Station). It was a form of demonstration that relied on extending Isaacs's more speculative framework into the domain of hard facts and calculability. Weeks and Campbell

identified the Amery and Ross Ice Shelves in the Antarctic as the prime sites for the production of icebergs, with their situation possibly leading to less resistant tows given the prevailing ocean currents. They deemed the most favourable and likely destinations to be the Atacama desert in Chile and the arid regions surrounding Perth in southwestern Australia.

Like Isaacs, Weeks and Campbell augmented experimentation on (small) physical icebergs with calculations of how icebergs could be expected to behave when towed long distances. To make their calculations, Weeks and Campbell drew on data provided by the Earth Resources Technology Satellite, also known as Landsat 1, the United States's first satellite dedicated to monitoring the earth's natural resources (Mack 1990; Parks & Schwoch (eds.) 2012). In addition, they performed a series of towing tests to determine the variable levels of drag occurring at different velocities, here concretely building on Isaacs's experiments with the ice blocks and their assuming the shape of a ship's hull. Pursuing their more precise calculations, they proposed building a "super-tug" that would be able to tow a berg with a width of 2.8 kilometres at a rate of 0.5 metres per second (Weeks & Campbell 1973*b*: 36); defined the melt losses in relation to wind and water temperature; and, finally, noted that determining the precise economic benefits to be derived from this method of water delivery were difficult to pinpoint given the number of factors that were dependent on the site-specificity of the delivery location. In their estimation, the ultimate price of iceberg water should be based on the going rate for irrigation water, as this was its most likely end usage.

Weeks and Campbell identified two major gaps in their study. The first was the absence of a data-derived assessment of the costs and losses associated with processing the ice upon delivery. The second concerned the uncertainty surrounding the climatological and oceanographic effects that could be expected as a result of having an iceberg of such a size inserted into a foreign ecology. Despite these unknowns, they considered their first approximation of the scheme a success in its ability to recoup what in their opinion was simply a matter of nature's waste:

> The best part of the scheme is that its principal commodity, the iceberg, is currently being completely wasted as regards man's needs. The icebergs calve from the shelves and drift in the Southern Ocean until they melt. The towing proposal merely redirects this water through an irrigation system on its way to the sea. We would guess that the potential rewards to man of the more tortuous path will prove to be well worth the additional energy expenditure. (Weeks & Campbell 1973*b*: 39.)

The manner in which Weeks and Campbell couched their more extensively

worked out version of Isaacs's scheme, as an extended irrigation system that would simply link back to the Antarctic and correct a deficiency in Nature's design, to some extent echoes Isaacs's own understanding of the importance of coming to understand the systemic interactions of complex ecologies. By bringing this "wasted" water into the purview of human interests, they were merely correcting—in their understanding, "redirecting"—what could be thought of as a "short-circuit" in the global environmental system. Weeks and Campbell were also making their case in the context of the consolidation of the West's real and perceived energy crises of the 1970s. Under these conditions of resource dependency, it is telling that they would promote a means of "piping," via this networked irrigation system, a new source of fresh water that would presumably be under the control of their national government. That the scheme also made economic sense, coming at a cost either less than or comparable to desalination programs, only strengthened their position: one had to convince cost-benefit conscious and risk-averse actors such as the federal government.

Later that same year, John L. Hult and Neill Ostrander, both physicists working for the RAND Corporation in Santa Monica, published a parallel report that addressed the seemingly increasingly real possibility of approaching Antarctic icebergs as a water resource at a scale available for the world as a whole (Hult & Ostrander 1973). This perspective saw Antarctic icebergs as an unlikely if technically possible solution to water scarcity. It was congruent with the RAND Corporation's espousal of a form of "rational choice" decision making, especially within environmental contexts juxtaposed with militarized economic rationales, that would inform policy makers in the early decades of the Cold War (Amadae 2003). While RAND was a broad institutional actor in constant evolution during these years, it was decisively influenced by the tenets of a social science seeking to encourage and sustain a certain version of American capitalism and democracy, both at home and abroad (Amadae 2003: 15). Modeling social and consumer behaviour patterns were abiding concerns. Such RAND-derived tracts as *The Calculus of Consent. Logical Foundations of Constitutional Democracy* (1962), written by James Buchanan and Gordon Tullock, would demonstrate how with increased information sources could come increased decision-making power, and, in turn, actionable, almost inevitable, outcomes.

Hult and Ostrander's comprehensive report is divided into three major sections detailing the current potential supply of (and demand for) fresh water, the technological feasibility of harvesting, transporting, and processing Antarctic ice, and an assessment of the potential social and environmental impacts of the practice. As they stated in the preface to the report, these physicists intended it to "provide background knowledge for potential users

and suppliers of Antarctic icebergs and for governments and agencies concerned with the development, regulation, or control of these valuable ice resources" (Hult & Ostrander 1973: iii). More so than Weeks and Campbell's analysis, the RAND report emphasized the economic potential of the bergs (estimating that a 10 per cent use of the annual yield of icebergs would be as much as $10 billion annually), and also the potential impediments presented by the surrounding sea ice. Hult and Ostrander claimed that satellite-derived imagery would aid in determining the precise characteristics of iceberg-sea ice behaviour over the coming years. In order to prove the feasibility of their proposal, they confined themselves to describing a model of the transport operations involved in moving tabular icebergs from the Ross Sea to southern California. They proposed to assemble a series of iceberg "trains," roughly three hundred to six hundred feet wide, over one kilometre in length individually but exceeding twenty kilometres when assembled into larger convoys. The individual tabular bergs would be linked by both propeller systems and icebreakers, with the entirety of the train propelled by a floating nuclear power plant (Hult & Ostrander 1973: vi). While they noted the widespread potential of emerging arid regions as buyers of iceberg-derived irrigation water, their report leaned towards the United States' Pacific southwest as one of the principal buyers and beneficiaries.

Across the three iterations of the scheme there is a discernible move towards increasing the accuracy of data-derived models, from Isaacs's experimental blocks of ice to Hult and Ostrander's ever more refined algorithms, which even accounted for phenomena such as the Coriolis force. In this shift, feasibility came to be commensurate with the increased availability, number, and reliability of environmental parameters—the broad accounting that Weeks, Campbell, Hult, and Ostrander all tried to incorporate into and reflect in their calculations. Each iteration, in its own way, was a translation of a series of environments that simply called for more data and an open-ended future that could be addressed through technical progress. This was clearest in the RAND report, with Hult and Ostrander using an unspecified "computer" to tabulate many of their findings (Hult & Ostrander 1973: 41–44). These same authors also called for the continued development of satellite observation as a crucial component of their ability to document the physical environments along the iceberg transportation routes (Hult & Ostrander 1973: iii). Icebergs, in this world of rational decision making, resource in/dependence, and parametric modeling, extended from ice shelves in the Antarctic to algorithms in a paper report. Yet this extension did not follow either an ideological or technical teleology. It reflected the evolving ways in which natural phenomena such as icebergs can be taken up into a set of social relationships that are contingent and human-made.

3D

Isaacs's idea, outside of its reconceptualization in formalized reports, incited interest in more ephemeral venues such as academic conferences. Weeks and Campbell presented an early version of their article at the Symposium on the Hydrology of Glaciers, held in September, 1969, in Cambridge, England (Weeks & Campbell 1973*c*: ii). To bring the idea home to the participants, Weeks described irrigating an area of 1,300 square miles for an entire year with a piece of ice the size of the London airport and, in his comparison, twice as high as the six-hundred-and-twenty-foot Post Office Tower (Behrman & Isaacs 1992: 51). Images such as these helped capture the imaginations of fellow scientists and engineers.

Later in the 1970s, Georges Mougin, a French engineer, undertook a series of modeling experiments of his own to test the economic and physical feasibility of towing an Antarctic iceberg to Saudi Arabia. Mougin became part of Iceberg Transport International (ITI) Ltd, which was backed and founded by Prince Mohammad Al-Faisal, the nephew of King Khalid of Saudi Arabia and the person, at the time, in charge of its water desalination program (Iowa State University, n.d.). Beginning in 1977, ITI convened a series of conferences at Iowa State University in order to seriously address the testing of potential materials and scientific scenarios that could assure the timely and cost-efficient transportation of icebergs across the Atlantic and beyond. The first, held in Ames, Iowa, was financed by Al-Faisal and the National Science Foundation. Isaacs was invited to attend, but could not due to prior obligations. Weeks spoke at this first conference and, like Isaacs later, voiced his concerns that anyone trying to move an unwrapped berg from Antarctica to the Arabian Peninsula "would end up with nothing but a towline" (Behrman & Isaacs 1992: 52). Hult and Ostrander also presented a paper at the conference. Its proceedings were published the following year as *Iceberg Utilization. Proceedings of the First Annual Conference and Workshops on Iceberg Utilization for Fresh Water Production, Weather Modification, and Other Applications, held at Iowa State University, Ames, Iowa, USA, October 2–6, 1977*. The proceedings were edited by A.A. Husseiny, an associate professor of nuclear engineering at Iowa State, and a personal friend of Prince Al-Faisal (which helps to explain the conference's location).

As ITI began its simulation work on actual icebergs, interest in the project gradually dropped off, particularly on the part of the Saudi Arabian government, given the world price of oil in the early 1980s. Mougin had to wait nearly thirty years to relaunch the project. In 2009 the French software design and simulation technology company Dassault Systèmes agreed to fund an in-depth simulation of Mougin's plan, now shifted to the Northern Hemisphere, of towing a seven-million-ton iceberg from the coast of New-

foundland to the Canary Islands. Dassault, known for producing advanced product-testing software for the likes of Boeing and Toyota, was looking for ways to demonstrate the utility of simulation technologies to scientists and engineers grappling with issues of broader public interest. The company took on Mougin's project as part of its "Passion for Innovation" program, which entailed Dassault donating the labour of engineers and use of their sophisticated software applications and simulation hardware. The results of the collaboration have been disseminated via Dassault's website, which rechristens the project "icedream" (Dassault Systèmes n.d.*a*); a 2010 documentary film, *The Iceberg Project*, directed by Jean-Michel Carillon; and, finally, a new company, Water and Power from Icebergs, and its website, managed by Mougin himself. The ultimate aim is to prove the feasibility of the project, and through this process secure external funding, whether governmental or from the private sector, to ensure that it comes to fruition.

Documentation of the project, other than that produced by Dassault and Mougin, is scarce. Soon after the completion of the simulated towing operation, it garnered press coverage from such techno-utopian publications as *Fast Company* (Sax 2011) and *Wired* (Brown 2011), as well as broader circulation in *Time* (Grose 2011) and *The Atlantic* (Madrigal 2011). The tightly controlled "product" of the collaboration signals the software-derived and intellectual copyright issues at stake. Using its patented CATIA 3D computer-aided design software, Dassault created a parametric model of the towing that incorporated data from a year's worth of remote sensing, from ocean currents and temperatures, to wind speeds and direction, and storm patterns, as well as other meteorological events. CATIA is typically used for Dassault's systems engineering projects, but here, along with its Dymola (Dynamic Modeling Laboratory) software, it was deployed in order to capture the complex series of phenomena and controllable variables (such as the hydrological layer wrapping the berg, the speed of the tug, its chosen navigation route, and so on) that the towing entailed (Dassault Systèmes n.d.*b*). The group of engineers at Dassault was joined by select oceanographers, meteorologists, and glaciologists invited by Mougin. Amongst them was Peter Wadhams, a professor of ocean physics at Cambridge University, and a long-term advocate of Mougin's plan (Wadhams 1990).

The Iceberg Project presents the fast-paced world of digital simulation and virtual reality at Dassault as being on the cutting edge of technical possibility. Part of Dassault's donation to the project also includes "the power of 3D simulation" (Kwanza-Dassault & Carillon 2010), with the ultimate virtual reality of the towing that they created serving as not only a testing ground for its limits, but also as an exercise in concrete visualization and experiential availability. The documentary depicts Mougin, the Dassault engi-

neers, and Wadhams all immersed in this virtual environment of the iceberg on the North Atlantic. With virtual reality goggles affixed, they talk into the camera about the ways in which this digital world can be "experienced" and how the models of icebergs from the 1970s now seem like outdated precursors. Clearly, authority over icebergs is directly proportional to the capacity to accurately represent them for the purposes of commodification and use.

As an *Engineering and Technology Magazine* profile of the towing project emphasizes, the principal advantages of the simulation technology were its elimination of high research and development costs if the tests had involved actual icebergs; the mitigation of human and ecological risks; and finally and most importantly, the ability to repeat the towing, again and again, with a range of logistical and operational outcomes (Harris 2011). It also allowed for a high degree of precision in calculating the melt rate of the iceberg and the efficiency of the insulation system. The conclusion of the simulated tests, an integrated drift model, makes the data-driven claim that a single tug, departing the coast of Newfoundland around the middle of June, could tow the seven-million-ton tabular iceberg to the Canary Islands in one hundred and forty-one days with minimal melting. The drift model is the synthesis of the project, incorporating all the data sets into a single parametric model. The 3D simulations presented in the documentary are not a necessary part of the calculability of the towing. Rather, they allow for this "immersive" and, one assumes, convincing quality of the idea to take shape—a quality of particular relevance for potential investors.

While Mougin and Dassault's simulated towing seemingly looks to the future, its oceanographic and meteorological data is derived from the very near past. As such, the repetitions and adjusting of parameters involved rely on historical environmental conditions. It is tempting to compare these digital environments to recent efforts to engage with environmental pasts through computer-aided means. Consider Stanford University's "Spatial History Project," or the Network in Canadian History and Environment's "GeoSpatial Historian" initiative, or the well-publicized "Mannahatta/Welikia" project supported by the Wildlife Conservation Society, which all differ substantially in how they approach, document, and analyze the past through a sense of spatiality that is subsequently represented through digital means. They nonetheless share the common concern of excavating and recreating past environments in order to establish a historical-environmental continuum that adds depth to our understandings of the ecological present. By way of contrast, the environments created by Dassault might profitably be placed in conversation with the longer history of iceberg transport and modeling, through a more science and technology studies-derived approach that addresses these environments from the generative side of their produc-

tion—that is, from within their diverse points of origins across labs, virtual reality theatres, software algorithms, and screens.

For the case of Dassault and the parametric modeling of iceberg towing, this entails documenting how this environment has emerged and what uses it is being put towards. Without falling into the trap of "screen essentialism" (Kirschenbaum 2008: 27), we should rather look to the processes of data capture and such infrastructural interfaces as satellites, buoys, balloons, and other remote sensors that inform the "environment" appearing in these models. Add to this the "supplementary" role that the virtual reality of the tow plays, and it can be seen that this digitally-rendered environment is defined by its phenomenal inputs. To historicize the digital through the lens of the environmental is to privilege the interfaces that capture phenomenal data, thus pushing such infrastructural technologies as satellites to the fore. In this equation of "environments," made evident by the importance of repetition and variation implied by parametric modeling, the work of documenting environmental change leads to a tension between the past uses of and approaches to icebergs and their future iterations of possible, calculable use.

Conclusion

Thinking about the politics of calculation brings to mind Isaacs's means of convincing Americans of the 1960s, and southern Californians in particular, of the reasonable cost of icebergs as a source of water provision. With complaints rampant as to the cost of desalinated water, Isaacs worked out the cost per acre-foot of that society's crucial liquids: beer and coffee, $800,000; bar whiskey, $20 million; Chanel No. 5, $40 million (Behrman & Isaacs 1992: 55). The construction of an iceberg as a commodity was intimately linked to its representation as a controllable object. Today, icebergs seem again to be on precisely this cusp between public interest and private control, between often ecologically short-sighted policy-led development and the sometimes far-sighted optics of corporate profit-seeking.

For Northern environmental historians, thinking of ice as a generative social relationship at large is a fruitful endeavour. Making ice available and claiming it as an emergent resource would seem to be an exclusively human practice, and thus one subject to processes of semiosis. Yet this practice relies on all the methods of visualization I outlined above. Besides being media environments in their own right, these methods also make icebergs an iteratively quantifiable, representable, and commodifiable phenomenon that we come to know through its various representational strategies. Does it help or hinder Dassault and Mougin's case that these are North Atlantic icebergs, tinged by Titanic-histories of human interaction, rather than Ant-

arctic ice islands, without human-derived markers of occupation and use? In part, this is an (environmental) historian's question to answer, especially when it comes to thinking about what role historical narratives can play in influencing governmental policies and their own shaping of resource use and demand (Sabin 2010).

Early on in the proceedings of the First International Conference on Iceberg Utilization at Iowa State University in 1977, the glaciologist Henri Bader noted that given the lack of government interest in iceberg transportation schemes in the early 1970s, "[t]he idea seemed destined for early filing in the archives" (Frazier 1977: 299). And yet the question "Is there an iceberg in your future?"—which served as the title of the *Science News* profile of the event—has been amenable to reinterpretation and appropriation well beyond its heyday in the late 1970s. It resonates in the present, given our awareness of global warming and its production of various incarnations of ice as increasingly akin to an "endangered species" (Carey 2007: 500). As such, if there is indeed an iceberg in our inevitably common environmental future, the open question remains as to by what means, and perhaps by what media, we will come to know it.

NOTES

[1] At the time of writing, a list of such emerging media environments could include the ice wall being built by Tepco, the operator of the Fukushima nuclear power plant, to contain its radioactive reactors (BBC 2014), and NASA's Operation IceBridge, a project that seeks to map out in greater detail the bedrock beneath the Antarctic ice sheet (NASA 2013).

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Re-Conceptualizing the North

A Historiographic Discussion

ABSTRACT The past few years have brought a surge in re-conceptualizations of the North in the humanities and social sciences. Bringing together history, environment, geography, politics and culture, these re-conceptualizations offer frameworks, terminology and perspectives designed to situate the North in its complex modern context. They are linked by the authors' shared interest in what the North has looked like and what it will look like in the future. This paper engages with a few of these re-conceptualizations in order to understand what agendas they put forward, explicitly and implicitly, and how they are situated within historical contexts. In this context, I ask what the North *encompasses*: which narratives, identities and connections merge with latitude, climate and physical environment to create new (and not-so-new) ways of thinking about northern spaces? Ultimately, I argue that these re-conceptualizations of the North are in fact themselves articulations of the future: developed and presented to tell particular stories, they are part of a larger story, one that reaches into the past and one which will continue to evolve and change.

KEYWORDS North, Arctic, historiography, indigenous voices, climate change, transnational, polar geopolitics

Introduction. Re-Conceptualizing the North

The past few years have brought a surge in re-conceptualizations of the North in the humanities and social sciences.[1] Bringing together history,

environment, geography, politics and culture, these re-conceptualizations offer frameworks, terminology and perspectives designed to situate the North in its complex modern context. They are linked by the authors' shared interest in what the North has encompassed and what it has looked like, and what it will look like in the future. Whilst these works address a core set of common themes, they also differ in important ways. This paper engages with a few of these re-conceptualizations in order to understand what agendas they put forward, explicitly and implicitly, and how they are situated within historical contexts. The works discussed here are chosen for their perceived impact on the field and their representation of scholars from across the Northern world.[2] Ultimately, this paper argues that these re-conceptualizations of the North are in fact themselves articulations of the future—and, further, that they are not as new as they claim to be.

Much has been written on the definition, the borders and boundaries, and the demarcations of the North (Keskitalo 2004; Schimanski, Wolfe & Niemi 2009; Shadian 2013; Doel, Wråkberg & Zeller 2014). It is clear that borders shift and change, and that *North* (and associated adjectives) can be defined in myriad ways to suit myriad purposes. These borders are constantly being negotiated, modified and revised according to interest, context, approach and intent. I am most interested in the *who* and *why* of these borders and boundaries. Who draws and delineates them, and for what purposes? Whom do they serve? Or, rather than asking where the North begins and where it ends, I am interested in asking what the North *encompasses*: which narratives, identities and connections merge with latitude, climate and physical environment to create new (and not-so-new) ways of thinking about northern spaces (Lemus-Lauzon 2013)? Who can, and should, legitimately speak for the North? Which voices matter, and why?

In today's political and media circles, there is sustained interest in the North, especially in climatic, environmental and security contexts—and, together with this interest, a demand for expert advice on Northern issues. In a recent discussion of the legacies of polar science, Michael Bravo rightly attributes this interest to

> the intersection of three global phenomena: the impact of climate change on the Arctic, the volatility of international commodity prices in response to unprecedented demand for minerals and hydrocarbons, and the political contest for polar resources. (Bravo 2009*a*: xiii.)

To this list we can add the rise of indigenous voices and agency in governance, questions about the ability of technology to shape environmental futures, and uncertainty over sovereignty questions and the balance of power in the

North.[3] In response, humanists and social scientists are taking a variety of positions and stances. Some provide direct, solicited advice to governments and companies, whilst others provide less direct advice through the media and other publications. Some argue that scholars should maintain a neutral position and refuse to enter political debates. Still others see this demand as a new opportunity to engage with the public through conventional and social media, and to win funding in the increasingly impoverished academic economic climate. I engage with these themes and questions by charting the discursive terrain and reviewing the ways in which re-conceptualizations of the North are playing out in the humanities and social sciences communities and being broadcast to audiences outside academia.

The Geopolitical and Transnational North

When we survey recent re-conceptualizations of the North, the clearest vision that emerges is one of the North as a moving, shifting geopolitical space. This space reaches far beyond the traditional "great white North," which encompasses the so-called Arctic Eight (Canada, Denmark [for Greenland and the Faroe Islands], Norway, Sweden, Finland, Iceland, Russia, and the USA [for Alaska]), and its relevance is increasingly felt farther south. It is in this light that Ronald E. Doel, Urban Wråkberg and Suzanne Zeller propose the term *New Arctic* to refer to "a recent era in circumpolar history set in motion by an unparalleled confluence of political and natural phenomena" (Doel, Wråkberg & Zeller 2014: 1). This New Arctic encompasses rising interest in the Arctic's raw materials and natural resources, the opening of Northern shipping routes, and escalating environmental worries, all of which form part of broader geopolitical conversations.

This desire to link the North to other parts of the world is by no means a new one. In 1922, for example, Canadian Arctic explorer and ethnologist Vilhjalmur Stefansson wrote that

> the aeroplane, the dirigible, and the submarine [were] about to turn the polar ocean into a Mediterranean and about to make England and Japan, Norway and Alaska, neighbours across the northern sea. (Quoted in Stuhl 2013: 101.)

Today, China's voracious appetite for natural resources is putting pressure on Northern communities and governments (Chen 2012), and climate change is increasingly revealing connections between the North and the rest of the world. "The dramatic melting of Arctic ice calls for multilateral efforts to deal with the widespread implications of climate change," explain Doel and his colleagues—implications which will necessarily be global in

nature as the melting ice raises sea levels, changes far-off weather patterns and accelerates global warming.

The recognition of the North as a geopolitical space stretching far beyond the Arctic Circle raises some thorny questions: What does the North encompass, physically and in the imagination? How are identities and connections construed and contested in Northern contexts? Who can (and should) legitimately speak for the North? As Klaus Dodds and Richard Powell remind us in the context of the Arctic Council, where China, India and South Korea (among others) now have observer status, "the knotty business of who can be an observer raise[s] unsettling issues of geographical and political forms of proximity" (Dodds & Powell 2013: 4). An intergovernmental forum established in 1996 to bring together the Arctic Eight, indigenous permanent participants, and other observers, the Arctic Council provides a forum for cooperation and interaction on common Northern issues, particularly environmental protection and sustainable development (Keskitalo 2004; Koivurova 2010; Young 2010). The admittance of traditionally non-Arctic nations as observers highlights the growing desire of more southerly nations for influence in the North—and that their admittance was strongly contested by some of the Arctic Eight suggests new challenges to the latter's historically-held authority. These challenges will only multiply as the North's economic allure intensifies (Byers 2009; Emmerson 2010; Grant 2010). This geopolitical messiness is eloquently captured by the *Financial Times*' Sara Wheeler, who writes that the rush to claim the Arctic is "colder than the scramble for Africa but no more dignified" (Wheeler 2010).

Lacking an official voice at the Arctic Council, though, are precisely the actors which Dag Avango, Annika E. Nilsson and Peder Roberts identify as critical to future governance in the North: unrepresented indigenous peoples and groups, as well as companies, industries, NGOs, and other non-state actors (Avango, Nilsson & Roberts 2013). How all these groups will—or won't—work together in the coming years and decades in the North is a fascinating and critical question. How will natural resource industries influence decision-making and affect communities? To what degree will regions such as Greenland and Nunavut continue to pursue increased self-representation and self-determination, and how will these processes affect the lines we see on maps today (Niemi 2007)? To what extent will non-state actors comply with or push back against state-based governance (Knechta & Keil 2013)?

These questions are especially pertinent in the context of clashes between northern indigenous groups and state governments. By shutting down the Russian Association of Indigenous Peoples of the North, Siberia and the Far East (RAIPON) late in 2012, the Russian government underscored the extent to which the recognition and power of indigenous voic-

es in national and international discourses on the North is still uncertain, as well as the degree to which indigenous agency varies within the Arctic Eight (Wallace 2012). These questions are also important when it comes to the North's natural resources, which were until recently considered far too remote, far too difficult, and far too expensive to extract. These resources are becoming increasingly integrated into international markets, leading to massive proposed investments and huge influxes of workers into sparsely populated Northern regions. For Greenland in particular, northern natural resources offer a hand for negotiation in debates over territorial status, a tool for identity politics, and a possible way to realize political ambitions in the face of economic challenges (Fuglede, Kidmose, Lanteigne & Schaub 2014; Nielsen & Nielsen 2014; Rosing 2014).

The historical connections of Nordic nations to the North has produced relationships that continue to ground Nordic claims to Arctic identity in the present (Østergård 2002; Musial 2009). This is at the heart of the term "Arctic *Norden*," the title of a recent research project examining the traditional Nordic nations—Sweden, Norway, Denmark (for Greenland) and Iceland—as "a permeable sub-region of significance to global affairs" (Sörlin 2013: 2). Based in Sweden and led by Sverker Sörlin between 2007 and 2012, the project focused on the scientific, diplomatic and political connotations of *Norden*, especially in the Cold War arena. The basic idea, Sörlin explains, is "to regard the Nordic region not just as a set of countries that happen to share a northerly location but instead as an extended or 'transnational' region." Sörlin and his team propose "an image of the Nordic countries that stretches far beyond their conventional borders" (Sörlin 2013: 2).[4] This approach deliberately presents the Nordics as a historically interconnected region in order to argue for its broader geopolitical presence and to demonstrate that *Norden*'s image and prestige matter in face of challenges and threats from larger nations. The implied argument is one in support of greater regional, or intra-Nordic, cooperation. Small nations can only bear so much weight in the modern world, and to have a real impact on the future of the North—for example, to stand up to the growing interests of nations such as China—*Norden* members will need to draw upon their historical ties and act in cooperation. There are, indeed, more actors than ever before in the North: at Svalbard's Ny-Ålesund research station, to take but one example, Norway, the UK, France, Germany, Italy, the Netherlands, China, Japan, South Korea and India are active, and money pours in from the European Union (Hacquebord 2009: 12). Sörlin emphasizes that the *Norden* nations have shared past experiences, both positive and negative, that can be used to develop a collective vision for the future. The impact of Nordic cooperation in today's Arctic, including political rapport, institu-

tion-building and scientific collaboration, he and his colleagues argue, will depend upon regionalization beyond borders and upon the cultivation of historical relationships for present aims.

In his reflections on polar science during the International Polar Year of 2007–2008, Michael Bravo puts forth another re-conceptualization of the North: a *post-polar* approach which de-couples the Arctic and the Antarctic. "As the comparative importance of the connections between Arctic ecosystems and the temperate regions become better understood," writes Bravo,

> historians looking back at the present day may describe the Arctic as entering a "post-polar" era, and the notion of "polar science" as an artifact of the twentieth century, when in the light of the alliances between geopolitics and the field sciences, it made sense to group the Arctic and Antarctic as two of a kind. (Bravo 2009*a*: xiv–xv.)

Pointing to sharp differences in governance, including the internationally-recognized conservation and protection clauses of the Antarctic Treaty, Bravo argues that it is unlikely that the same approaches to issues such as climate change and environmental sustainability will work in the two regions. By rejecting the possibility of an Arctic Treaty and painting the North as a major new arena for exploiting and competing for natural resources, he describes an intensely politicized space in which state and non-state political actors abound—a situation he worries will yield inappropriate policy solutions for the North as political maneuvering is dressed up in the language of environmental conservation.[5] This post-polar approach to the North forms part of a broader post-Cold War historiographic stance in which the strategic import and militarization of the Arctic world are supplemented by issues of climate change, resource extraction and geopolitical alignments along axes other than East-West.

It is clear by now that these re-conceptualizations of the North embrace a transnational style of thinking and analysis, both explicitly and implicitly. "Transnational" has become a buzzword in recent years, indeed a fashion.[6] Here, I use it to refer to approaches which emphasize political groups and structures and environmental phenomena that transcend national borders. In this sense, recent work on the North uses transnational perspectives to further understanding of the region in three main ways. First, it draws a set of states traditionally far removed from the North into that sphere: China and India, to name but two, have been deemed "new" Northern nations for their interest in northern resources and their desire to make their mark on the Arctic. By examining the political tensions between traditional and "new" Northern nations in forums such as the Arctic Council, this work illuminates the ways in which Northern identity and authority are being

negotiated and built—issues which are of especial interest as indigenous groups and Northern regions increasingly look to new players for natural resource investment and income. Second, a focus on peoples such as the Sami and Inuit, whose traditional territories cut across national boundaries, also brings out the ways in which stewardship of land and resources is used to negotiate representation and self-determination, and through which cultural integrity is shaping political processes at various levels (Wråkberg & Granqvist 2014). Finally, transnational perspectives also appear in the context of climate change and melting Arctic ice, which recognize neither national borders nor territorial limits. As Bravo writes,

> Scientific research is producing a fascinating picture that reveals the extent to which the Arctic is connected to other regions through global-scale carbon and heat exchange systems through the oceans, atmosphere and human economic activity. (Bravo 2009*a*: xiv.)

He emphasizes the environmental links between the North and the rest of the world which are increasingly integral to how we perceive, interact with and make decisions about the North.

Even with this emphasis on the transnational, the nation still features prominently in Northern affairs, and with it come national interests, identities and rivalries. Clashes from the Canada-Denmark conflict over tiny Hans Island in the Nares Strait to the more ominous Canada-Russia dispute over the North Pole seabed lead Doel, Wråkberg and Zeller to describe their New Arctic as a region immersed in "a new era of saber-rattling" (Doel, Wråkberg & Zeller 2014: 3). In this North, flag planting, both literal and figurative, matters as nations grapple with changing political, economic and commercial realities. Conflict in and militarization of the North are, of course, themes integral to Cold War historical approaches, which treat the North as a strategically important region of intense interest to both Washington and Moscow.[7] Lying underneath a key potential missile path between North America and the Soviet Union, the Arctic was central to North American continental defense as well as to Soviet offensive and defensive planning, playing host to huge military bases, radar and early warning sites, refueling stations, scientific camps and other installations which gave double meaning to the term "Cold War." Today, these issues are mirrored in the question, much debated of late in some quarters, of whether conflict between nations is inevitable in the North (Borgerson 2008; Ebinger & Zambetakis 2009; Fairhall 2010; Murray 2012).

The Living and Spatial North

Contemporary re-conceptualizations of the North are largely unified in their vision of the North as a place teeming with life, peopled by indigenous residents, scientists, diplomats, politicians, miners, and tourists, among others. Following a trend that stretches back to the rise of indigenous rights movements in the 1960s, they reject the Arctic sublime of the Romantic painters, the fatalistic fascination of the British Imperial era, and the frontier mentality of heroic Western explorers. Instead of an empty or barren land, they treat the North as a place teeming with life and lively interests. At the heart of this living North are indigenous peoples, whose voices are increasingly being taken up, supported and encouraged by social scientists and humanists. As Robert McGhee, the curator of Arctic archaeology at the Canadian Museum of History, depicts so elegantly, the still-persistent view of the North as disconnected, "a world apart," mythic and even romantic, belies the region's long history of indigenous settlement, which McGhee and others use to humanize and ultimately define the North (McGhee 2007: 10).[8] These approaches are converging on a North in which indigenous voices are emphasized, a North in which indigenous actors are accorded priority over state actors and historically-drawn national boundaries. This stance is not restricted to the northern sphere; rather, it is part of a broader realignment of the past decades which rejects schematic narrative templates, in James V. Wertsch's terminology, and brings out actors, events and narratives which have previously been overlooked (Wertsch 2002).

Two ideas, or conceptions, of the North and northern landscapes are being challenged here: the North as a pristine wilderness and the North as a wasteland. As Jonathan Luedee argues in his work on the visual politics of northern spaces, these ideas remain prominent in political debates, where they often erect barriers to constructive discussion (Luedee 2013). Writing about the politics of Alaska's Arctic National Wildlife Refuge, where oil drilling has been politically controversial for more than three decades, Luedee depicts a socially constructed binary: on one hand, anti-drilling campaigners such as Barbara Boxer, a Democratic senator from California, represent the North through gorgeous images of a God-given land replete with polar bears, migrating caribou and colourful wildflowers, whilst on the other hand pro-drillers such as Frank Murkowski, a Republican congressman from Alaska, represent the North as a frozen wasteland of snow and ice, captured by a blank sheet of white paper. Both of these visual and rhetorical images, Luedee argues, obscure the "deep entanglement of nature and culture" in the North and ultimately dehumanize northern landscapes, acting as blinders which shape how we view and approach the North.[9] Luedee's argument is that we need to recognize the *human*, or living, aspect of the North, in all its facets.

Scholars are increasingly responding to this need by placing Northern indigenous peoples at the centre of their narratives. The re-conceptualizations of the North discussed here broadly agree on the importance of indigenous voices, but differ as to the effective projection of those voices and their ability to make an impact in the near future. Bravo illuminates the ever-present divide between intention and action in this regard when he notes that the International Polar Year of 2007–2008 distinguished itself from previous ones by

> the inclusion of a "humanities" theme "to investigate the cultural, historical, and social processes that shape the sustainability of circumpolar human societies, and to identify their unique contributions to global cultural diversity and citizenship."

But, he continues, whilst the recognition of the northern indigenous as "legitimate participants in this IPY represents a policy landmark and a departure from previous polar years," still Bravo considers that "its implementation placed severe constraints on participation" (Bravo 2009*a*). Others are more optimistic when describing the place of indigenous voices in political dialogues: Mark Nuttall, for example, argues that "a pan-Arctic indigenous politics [is giving] indigenous peoples a greater voice in discussions on environmental protection, sustainable development, extractive industries, health and well-being, and circumpolar security" (Nuttall 2012: 2). Either way, it is clear that the rise of indigenous voices at subgovernmental, national and international levels is reshaping governance in the North, especially in terms of land claims negotiations and bids for self-determination—and that these processes are far from complete. Whilst support for these voices is important, social scientists must avoid the trap of treating northern indigenous peoples as a uniform group. As Kirsten Thisted's work on indigeneity in Greenland reminds us, there is no single indigenous voice, emotional topography, or vision of the future: rather, these voices are multiple, diverse, and not always in agreement (Thisted 2013; see also Martello 2008; Bravo 2009*b*; Dodds & Powell 2013; Hastrup 2013).

As a place of life, culture and work, the North has also been swept up in the so-called spatial turn in history. This has led to the emergence of a *spatial* North in which social scientists, particularly archaeologists, marry historical and geographical methods of analyzing, representing and understanding the North.[10] P.J. Capelotti's investigation of sites from seven American expeditions to the European Arctic, for example, proposes field methodologies and cloud computing techniques to collect, interpret and network data in order to ultimately offer a model for archeological tourism (Capelotti 2012). How, such researchers ask, are northern spaces construct-

ed by the movement of people, animals, goods, and knowledge? How do settlements, research and industrial stations, and exploratory camps affect people and their relationships with the land over time? What role might such spaces play in the construction of the future North? The large-scale, fieldwork-intensive and usually very expensive nature of the spatial North comes through, too, in the Large-Scale Historical Exploitation of Polar Areas (LASHIPA) project, a Dutch-Swedish-Russian historical-archaeological project undertaken from 2007 to 2009 in the framework of the International Polar Year.[11] Aiming to understand the development of natural resource exploitation in the polar regions over the past three centuries and to shed light on the consequences of that development for today's geopolitical and environmental situations, LASHIPA saw eight fieldwork expeditions to Spitsbergen, South Georgia and the Antarctic. Through archaeological digs, GPS mapping, sketching, photographing and measuring old whaling, hunting and radio stations, mines, and mineral exploration camps, the LASHIPA team demonstrated how the social, technological, and political aspects of resource management and extraction have shaped Northern environments and cultures not merely for years or decades, but for centuries. This work depicts the North as a space in which indigenous and non-indigenous people have long lived and worked, a place of daily needs and problems and solutions, of big challenges and mundane routines: truly a *living* North.

The Future North

As the consequences of climate change for the North look ever more troubling, the region is increasingly being discussed in the popular environmental literature, too. With titles such as *The New North* and *Who Owns the Arctic?*, these books—written by scientists, geographers and lawyers—make the North out as a place often far away in geographic terms but close to home in environmental (and, to a lesser extent, emotional) terms. Melting Arctic ice, they emphasize, will affect us all, and will have a significant impact on the ways in which we live, eat and move around. The crux of the problem presented in this literature is the need to balance protection of fragile Northern environments (inclusive of peoples, animals, flora and land- and sea-scapes) with economic opportunities for trade and the development of natural resources, all whilst confronting a changing climate.

In this context, the term *New Arctic* reappears in the writing of Alun Anderson, a biologist and former editor-in-chief of *New Scientist*. Anderson's New Arctic has a different connotation from that of Doel and his colleagues, a more apprehensive and forbidding one. Anderson argues that the North is undergoing irreversible and damaging changes that are rapid and far-reaching, and that will affect all aspects of the northern ecosystem.

The title of his book captures the heart of his message: *After the Ice* refers both to the annual melt of Arctic ice and to Anderson's argument that "an Arctic that freezes over and melts again each year is a completely different place for the creatures and the people that live there now"—including the starving polar bear on Devon Island which so disturbed Anderson on the second day of his trip to Canada's far north (Anderson 2009: 97). In contrast to Anderson's discouraging New Arctic lies geographer Laurence C. Smith's *New North*, an articulation of the future North put forward in his book *The New North. The World in 2050* (US title: *The World in 2050. Four Forces Shaping Civilization's Northern Future*) (2011). Halfway through the present century, Smith predicts that the Arctic Eight will be economic powerhouses and migration meccas, with cities such as Arkhangelsk (Russia), Nuuk (Greenland) and Hammerfest (Finnmark, Norway) flourishing and envied for their access to fresh water. The range of visions presented in such books underlines that the North's future is still very much in flux: its outlines are framed by the climate change underway, but its outcome is not yet fixed.

The overarching question which emerges from these and other similar books is how the North will be governed and contested as the ice continues to melt. Which organizations and bodies will provide vehicles for governance in a changing climate? To what extent will environmental protection and resource development be balanced? How will political, economic and security ambitions play out in the North? Or, to put it more simply, who will shape the future of the North, and why? Between thinning, receding and disappearing sea ice, calving and melting glaciers, increasing coastal erosion and seasonal changes, and the resultant disruptive impacts of all these changes on communities, infrastructures and planning, there is a newly emerging and as of yet undefined balance of power in the North. The need for governance and control may well be filled as much by non-state as by state actors—and, in particular, indigenous groups. Indeed, as Michael Byers argues in his book *Who Owns the Arctic? Understanding Sovereignty Disputes in the Arctic*, indigenous agency is at once a force unto itself and a tool which countries such as Canada can use to exercise sovereignty in the North (Byers 2009). The ever-growing presence of popular books on the North is a reminder that these issues have a wide reach and interest. Northern matters are everyone's business now—as are the processes by which voices are gaining, and trying to gain, legitimate agency to speak for the North.

Towards Conclusions

When we put all of this together, what do we get? Where do these re-conceptualizations of the North take us, where do they agree, and where do they differ—and why? How do they try to define the North, and to what

ends? And what are the challenges facing humanists and social scientists interested in the North from these perspectives?

The overview of work on the North provided here identifies several interconnected themes that are central to how the North is perceived today. The first is the depiction of a geopolitical North, a region extending in reach far beyond the Arctic Circle, a region increasingly politically and economically linked to countries with few historical or geographical connections to the North, and a region vital to the phenomenon of global climate change. This geopolitical North is more than a polar projection, a technical manipulation of cartography to see the world differently; rather, it is a true re-orientation of both geography and mindset. If we take this path to its extreme end, we come to Charles Emmerson's conclusion that "the Arctic has become a lens through which to view the world—and this, ultimately, is why the Arctic matters" (Emmerson 2010). A second theme coalesces around questions of environment and climate change: how humans have shaped the North and northern environments, and how the North has shaped those who live and visit there, both feature strongly in the re-conceptualizations discussed here, as do the implications of climate change for the North's land- and sea-scapes, peoples, and ecosystems. This focus tries to make sense of the place and role of humans in an environment that is changing in ways not fully understood, to grasp the implications of climate change for the North, and to understand how changes in the North will impact other regions of the globe. A third theme takes a transnational perspective that emphasizes the long geographic reach of economic interests and governance structures in the North, as well as the ways in which climate change is making the North's presence felt globally. Finally, this scholarship also takes up the question of legitimacy and agency, asking whose voices matter in Northern affairs and how this relevance is determined. Indigenous voices feature strongly here, and are often given prominent weight and attention.

Perhaps the most critical differentiation between recent re-conceptualizations of the North hinges on the scholar's place in policy discussions. With the demand for expert advice on northern issues today, the question of to what extent, if at all, social scientists and humanists should be involved in providing advice is paramount. For Doel, Wråkberg, and Zeller, the answer is clear: "Our largest ambition," they write, "is to work toward an improved understanding of Arctic scientific research, not only as history *but also as a resource for policy*" (Doel, Wråkberg, & Zeller 2014: 13; emphasis added). Researchers involved in the Swedish Assessing Arctic Futures project go a step further, identifying the creation of policy and decision-making tools as a key goal of their work and aiming explicitly to "develop tools with which proposed Arctic futures can be assessed beforehand, thereby offering the

decision makers a more comprehensive understanding of the consequences of paths to be taken."[12] But others are wary of interaction between scholars and policy makers. "Researchers in both the natural and social sciences are being invited to join the game of polar geopolitics to help devise strategies to redefine the polar regions," writes Bravo—but he worries that the use of scholarly research by policymakers is infused with prejudice and a lack of accountability:

> It is ironic that at precisely the moment when there is an international collective effort to harness environmental research in the Arctic under disinterested knowledge, there appears to be less transparency than ever about the use of academic research in the social and natural sciences by policy makers.

He continues: "As academic researchers we have an ethical challenge to preserve the intellectual neutrality and critical objectivity of our universities" (Bravo 2009*a*: xiii).

Even whilst heeding Bravo's legitimate concerns, it strikes me that humanists and social scientists have something important, even critical, to add to the cacophony of voices from politics, think tanks, science and industry that offer and provide advice on the North today. As the work discussed throughout this paper shows, humanists and social scientists, regardless of their disciplinary identity, can add a dimension frequently absent from the broader discussion: a historical dimension that links present and future concerns to past events and narratives. The governance, institutional, cultural and environmental contexts of the North have long histories that are too often ignored in political discussions and forums. As Joseph E. Taylor reminds us, history can serve policy making by reminding decision makers of the messiness and complexity of the past (Taylor 2008: 470). Social scientists and humanists can shed light on how past decisions and events have shaped today's governance structures and environmental conditions in the North, and how historical circumstances might influence or affect future options in the region. In this sense, humanists and social scientists, too, belong in the North, as a lens through which to tie northern pasts, presents and futures together.

What are the re-conceptualizations of the North discussed here—ones with specific names such as New Arctic or Arctic *Norden*, ones described as new polar politics or post-polar, ones that are nameless but nonetheless present—ultimately doing? They are themselves articulating and projecting possible Northern futures. In some cases they do so explicitly, and in other cases they do so implicitly by setting up structures through which we can envision the North.[13] By identifying themes and associated vocabulary,

these re-conceptualizations of the North set the agenda for further discussion; by assessing the authority and legitimacy of voices and storytellers, they suggest who has the right to articulate, debate and decide northern issues; and by looking into the past and drawing lines to the present and beyond, they construct narratives that can give us a framework for assessing and imagining various futures for the North. As Andrew Stuhl reminds us, the term "New North" has been used for decades to "structure the human relationship with the Arctic [and] imagin[e] the shape of Arctic futures" (Stuhl 2013: 96)—and, indeed, the work discussed here is also part of this genre of thinking and writing; that is, a way of imagining the North and of making a statement about its relation to the past, present and future.[14] In this sense, perhaps the most important message is that laden terms and ideas used to describe the North—*New North*, *Norden*, *New Arctic* and the like—are inherently embedded in historical contexts. These visions of the North, developed and presented to tell particular stories, are part of a larger story, one that reaches into the past and one which will continue to evolve and change.

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NOTES

[1] Here, I refer primarily to geography (including historical geography), political science (including comparative politics, governance and public policy), and history (including environmental and comparative history).

[2] This coverage includes Canada, the United States, Sweden, Norway, Denmark and, to a lesser extent, Russia, as well as the United Kingdom. Given the English-language nature of this special forum, I look primarily at re-conceptualizations published in English, with some Danish-language sources as well.

[3] Whilst important in northern narratives, technological change is beyond the scope of this paper. For technologically-oriented studies of the North, see Wynn 2007 and Jørgensen & Sörlin 2013.

[4] On historical and transnational Nordic identity, see also Østergård 2002 and Musial 2009.

[5] For discussion of an Arctic Treaty, see, for example, Fløistad & Lothe 2010 and Young 2011.

[6] I do not purport to deal with the messiness surrounding this term here. For an insightful discussion, see Taylor 2008.

[7] The literature on the Cold War North is vast. Two sources to start with are Tamnes 1991 and Ellingsen 1988.
[8] For another take on the southern relationship with the North, see Adcock 2013.
[9] For another take on visual imagery, this time photography, in the North, see Möller 2011.
[10] For the spatial turn in history, White 2010 is a good starting point. For the spatial North, see, for example, Wråkberg 2012: 194–195.
[11] For LASHIPA, see www.let.rug.nl/arctic/lashipa_web/.
[12] For the Arctic Futures project, see www.arcticfutures.se/.
[13] For a discussion of more explicit articulations of northern futures, see Dag Avango, Annika E. Nilsson and Peder Roberts' (2013) recent work on Arctic future in the context of voices, resources and governance.
[14] For another critical take on this type of terminology, this time in the context of the American West, see Taylor 2004.

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DAGOMAR DEGROOT

Exploring the North in a Changing Climate

The Little Ice Age and the Journals of Henry Hudson, 1607–1611

ABSTRACT During its nadir between approximately 1565 and 1720, the Little Ice Age cooled the Arctic by 0.5° C relative to early twentieth-century averages. Historians of past climates often craft declensionist and even determinist narratives of the Little Ice Age in the far north. Conversely, social or cultural historians usually depict the early modern Arctic environment as unchanging. The journals kept by Henry Hudson and his crew during their voyages of Arctic exploration provide detailed information on environmental conditions and human responses that bridge these different historical perspectives and concerns. The journals reflect the influence of the Little Ice Age in the Arctic, but also demonstrate that voyages of northern exploration were affected by complex and even counterintuitive relationships between global climate change and its local environmental manifestations. These relationships can only be examined with a rigorous methodology that confronts issues of scale and causation that are still rarely considered by climate historians. Ultimately, the journals reveal that a shifting climate was a dynamic, but hardly determinist, agent in the early modern exploration and exploitation of the Arctic.

KEYWORDS Climate history, historical climatology, environmental history, early modern history, Henry Hudson, Northern Passage, methodology, spatial scale, temporal scale

In recent months, reports released by the Intergovernmental Panel on Climate Change have confirmed that anthropogenic climate change is dramatically altering Arctic and subarctic environments, with alarming consequences for their inhabitants (IPCC 2014: 7). While the scale and potential consequences of modern warming are unprecedented, natural climatic shifts have also shaped past relationships between people and Arctic environments in ways that provide critical context for climate change today. From approximately 1565 to 1720, sulfur released by volcanic eruptions and a decline in solar radiation cooled the world's climate. This nadir of a longer "Little Ice Age" (LIA) manifested in the Arctic as a 0.5° C decline in average temperatures, relative to the early twentieth-century norm. This superficially modest cooling in fact dramatically altered the distribution of sea ice, the frequency of storms, and the strength of ocean currents across the Arctic and Subarctic (Mann *et al.* 2009: 1257; White 2014: 327; Zeeberg 2002: 104).

Most historians interested in past climate change have approached the LIA by investigating how cool and often unpredictable weather across the northern hemisphere contributed to famine and provoked social unrest in agricultural societies. Since cold temperatures seem so hostile to human life, histories of the LIA in the Arctic have often repeated even more overtly declensionist narratives that reinterpret the disappearance or decline of Norse settlements in light of climatic cooling (Parker 2013: xix; Lamb 1995: 260; Brown 2001: 262; Behringer 2010: 141). By contrast, many historians of human experiences in, and representations of, the Arctic during the LIA depict the far north as a homogenous realm of unchanging cold: a stage for human drama, but not an actor in its own right (Regard & Lemercier-Goddard 2013: 11; Ryall 2014: 121). Even environmental historians of the North generally focus on "northscapes" transformed less by their internal dynamism than their malleability in the hands of human explorers and colonizers (Jørgensen & Sörlin (eds.) 2013: 3).

With their detailed descriptions of both human decisions and environmental conditions, accounts of early modern Arctic exploration can unite these very different approaches to the far north. This article introduces detailed journals kept by Henry Hudson and his crew during four expeditions to high latitudes undertaken between 1608 and 1611, during a particularly cold phase of the LIA that many historical climatologists today call the "Grindelwald Fluctuation." For climate historians, an analysis of the journals tests and refines interdisciplinary reconstructions of the LIA in the Arctic. It challenges declensionist or determinist narratives by emphasizing the agency of people who resisted constraints imposed by a shifting climate, and it highlights the complexity of local environmental conditions that

could respond in counterintuitive ways to global cooling. For historians of the Arctic and Subarctic, this examination of the journals demonstrates the agency of an environment that co-evolved with human activity to influence its own representation and exploitation. It cautions against the assumption that Arctic environments encountered and described by early moderns were homogenous and unchanging. It also offers new insights into expeditions that helped transform European understandings of the Arctic and Subarctic in ways that would affect its later colonization. Ultimately, a climate history of the Hudson expeditions requires methodologies for confronting issues of scale and causation that have relevance for all historical scholarship (Howkins 2014: 294).

The Grindelwald Fluctuation endured across the Northern Hemisphere from approximately 1565 until 1630 (Pfister 2007: 57). Journals kept by Hudson and his crew record sea ice in places, and at times, that clearly reflect the existence of contemporary cooling in the Arctic and Subarctic. However, they also reveal that unrelenting cold did not always doom voyages of Arctic exploration, even in the chilliest decades of the LIA. The Grindelwald Fluctuation was, in fact, distinguished by highly variable weather, and even in more stable climates annual fluctuations in meteorological conditions are especially pronounced in the Arctic. Indeed, the first journey led by Hudson pressed far into the Arctic in a year of relative warmth, while the second soon succumbed to particularly frigid conditions. The course of Hudson's third voyage was scarcely affected by sea ice, while his last expedition was likely influenced by temperatures that were only slightly cooler than the twentieth-century norm. For the explorers, the influence of climatic trends was occasionally reinforced, but often mitigated, by complex interactions between the regional atmosphere, hydrosphere, cryosphere, and biosphere (Walsh 2008: S3).These environmental conditions were, in turn, mediated both by the agency of the explorers and the characteristics of their society.

The Hudson voyages therefore reveal that historians of past climates should establish not one, but four distinct relationships while crafting their narratives, especially when they approach topics relevant to the Arctic or Subarctic. The first must firmly link the local or regional environmental phenomena to activities conducted by human beings. The second must plausibly connect short-term weather events to long-term climate change. The third must join these atmospheric fluctuations to relevant changes in the geosphere, hydrosphere, cryosphere, or biosphere. Only then can historians of climate consider the fourth and final relationship, that between climate change and human history. Working through these relationships can help climate historians develop less declensionist or determinist conclusions about the complex ways in which decadal climatic fluctuations

Fig. 1. Changing perceptions of the Arctic in response to journeys of exploration. Top: a map of the Arctic published in the Dutch Republic on the eve of Hudson's voyage (from Mercator & Hondius 1606). Bottom: a map drawn by Willem Barents just before his death near Novaya Zemlya, in 1597 (from Barents 1599). While older maps depicted a vast polar continent connected to Greenland, in these newer maps the polar continent has been at least partially replaced by open water, and Greenland is surrounded by ocean.

affected human activity (Degroot 2014: 239). But nuance also has its limits, for climate change can seem like a more direct influence in human history when satellite maps of Arctic ice cover today are compared to environmental records in the journals kept by Hudson and his crew. Ultimately, analyzing the environmental context of Hudson's journeys demonstrates both the value of nuancing, and the importance of acknowledging, climate change as an agent in northern history.

Human and Environmental Contexts for the Hudson Voyages

The Arctic environment was still largely unknown to the organizers and participants of the voyages led by Hudson. From Ptolemy's second-century *Geographia* to the world map drawn by Johannes Ruysch in 1507, most European representations of the Arctic had relied on the hazy and imprecise recollections of adventurers who had never reached the very high latitudes. That would change later in the sixteenth century. Merchants in Europe's increasingly prosperous north could only indirectly access the rich lands and trade routes newly claimed by Iberian powers. After 1530, they therefore funded expeditions that sought alternative passages to Asia through Arctic waters to the northeast and northwest. Knowledge of the Arctic expanded as explorers travelled deeper into its icy seas. For example, notions of inhabited polar continents gradually disappeared from maps published after the ill-fated voyages led by the Dutchman Willem Barents (Fig. 1). Still, European explorers had scarcely approached the pole, or entered the high latitudes of the Canadian Arctic and the Russian Arctic beyond the Kara Sea. For many merchants and cartographers, hopes for an ice-free passage to Asia therefore persisted (Zeeberg 2005: 57; Zeeberg 2007: 36; Hellinga 2007: 31; Unwin 1995: 4).

Hudson was the first explorer of the far north whose expeditions would be financed by both Dutch and English merchants. Little is known of his early life, and his participation in sixteenth–century voyages of northern exploration has never been firmly established. Certainly he was influenced by Arctic myths that had not yet been entirely disproven by previous expeditions. Many scholars in Amsterdam and London, foremost among them the Dutch cartographer-clergyman Petrus Plancius, still argued that sufficiently deep water could not freeze. Moreover, they believed that northern temperatures in the summer were nowhere lower than at 66° N, and actually rose at higher latitudes in the continuous sunlight of that season. If sufficiently deep water could be found in the icy band that surrounded this temperate Arctic, a passage to Asia in the east, west, or perhaps even across the pole should be possible. In their four voyages, Hudson and his crews would attempt every conceivable route (McCoy 2012: 95; Murphy 1909: 2; Thomson 1975: 62).

The first three expeditions led by Hudson entered the Arctic off the northwestern coast of Norway, before pressing into the high latitudes north of Europe. Unbeknownst to the explorers, environmental conditions there were, and are, largely shaped by the relatively warm remnant of the Gulf Stream, known as the North Atlantic Current, as it collides with the frigid Transpolar Drift that presses south through the Fram Strait, and with cold currents flowing west from the Kara Sea (Fig. 2). Prevailing westerlies interact with the North Atlantic current to bring warmth to northern Europe and its surrounding waters, while the mingling of currents provides rich nutrients that sustain abundant marine life. Perhaps the most significant characteristic of the Arctic environment is the presence of sea ice, which oscillates in area from 7 x 106 km^2 in September to a high of 10 x 106 km^2 in March. The annual thickness and extent of sea ice in the Arctic north of Europe is most importantly determined by regional temperatures, wind patterns, and currents. All of these are influenced both by regular shifts in atmospheric pressure at sea level (expressed, for example, in the different settings of the North Atlantic Oscillation), and by climatic trends like the natural cooling of the LIA or the more rapid anthropogenic warming of the present (Walsh 2008: S4; Polyak *et al.* 2010: 1760; Marchenko 2012: 5; National Snow & Ice Data Center).

Sea ice in this variable and extreme environment comes in so many varieties that 183 are listed in the sailing guide published by Fisheries and Oceans Canada. Critical distinctions can be made between old ice, which does not melt in the summer; new ice, which does; pack ice composed of broken ice crushed together by wind or current; icebergs broken from a mainland glacier and afloat at sea; and drift ice, which consists of ice pieces, or floes, that have separated from the pack. Every voyage led by Hudson was influenced by the unique characteristics of one or more of these ice types (Day 2006: 144; Savours 1999: vi).

The fourth expedition undertaken by Hudson and his crew sailed into very different seas. The waters of the eastern Canadian Arctic and Sub-Arctic, bereft of sufficiently warm currents flowing from the south, freeze more completely than the seas north of Europe. The Labrador Current transports cold water south from the High Arctic, and has a cooling influence on the coast north of Cape Cod. Icebergs calved from glaciers on Ellesmere Island, Devon Island, and particularly Greenland are ferried south by the current. Warmer currents do trickle into the Davis Strait, delaying ice formation in its eastern opening. Meanwhile, the Hudson Bay is a relatively closed system, connected to the oceans only through narrow channels at points along its northeastern boundary. Because many rivers flow into the Bay, it has a lower average salinity than ocean water, and it therefore freezes

Fig. 2. A map of the Arctic and Subarctic, depicting currents and relevant locations for the Hudson voyages. Warm currents are in red; cold currents are in blue (Polyak et al. 2010: 1758; "Arctic Ocean Currents Map," Arctic Portal Library; http://library.arcticportal.org/1494; access date 23 June 2014).

comparatively quickly. The Bay ices over completely in the winter, and the springtime breakup of the ice is shaped by the Bay's current, the pattern of rivers that empty into it, the dynamics of airflow sweeping over increasingly snow-free land, and the influence of advection. The consequence of these complex processes is counterintuitive: in the summer the last ice in the Bay lingers both at its extreme north, near Southampton Island, and its extreme south, in James Bay (Etkin 1991: 19; Catchpole 2003: 19; Pharand 1984: 2).

Many of these environmental realities influenced, and were influenced

by, the climatic fluctuations of the LIA. To obtain records of average seasonal temperatures across the Arctic during the LIA, historical climatologists have employed scientifically analyzed "proxy" sources that respond to climate change alongside model simulations and documentary observations. These reconstructions suggest that sea ice and glaciation in the Arctic north of Europe and the high Canadian latitudes generally expanded in the cooler temperatures of the Grindelwald Fluctuation (Crespin *et al*. 2009: 394; Crespin *et al*. 2013: 327; Lemke, Harder & Hilmer 2000: 278; Zeeberg 2002: 104; Funder *et al.* 2011: 750). However, these relationships were hardly straightforward. For example, the climatic trends of the LIA in the far north were at times reinforced, and occasionally interrupted, by the atmospheric pressure oscillations that accompanied changes in the North Atlantic Oscillation (NAO) and the Arctic Multidecadal Oscillation (AMO). Moreover, after 1600 CE the West Spitsbergen Current likely transported more heat northward into the Arctic, which in that region counteracted the cooling influence of a ten percent reduction in the strength of the Gulf Stream. Model simulations also suggest that Arctic temperatures in autumn, winter, and spring likely responded most dramatically to the climatic oscillations of the LIA, while summer temperatures remained relatively stable (D'Andrea *et al.* 2012: 1007; Grumet *et al.* 2001: 142; Crespin *et al*. 2009: 394; Crespin *et al*. 2013: 327; Zeeberg 2002: 104).

European journals of exploration do not provide a direct window into these environmental relationships. Hudson and his crew interpreted northern natures and peoples in light of the expectations and assumptions that informed not only English imperialism, but also the complex blend of Christian and Aristotelian concepts still central to contemporary natural philosophy. For the explorers, the far north was a purifying environment. It revealed and tested the virtue of those who entered it, and because it was bereft of accessible gold or silver, its exploration contrasted with the plunder carried out by the Portuguese and Spanish in the south. It was also an extreme wilderness, a place in which environmental norms and laws were seemingly reversed. Explorers who hazarded this realm were remembered in narratives that contributed to the strengthening collective identity of emerging nation-states, especially when their voyages ended in tragedy (Regard & Lemercier-Goddard 2013: 11; Martin 2006: 6; Burstyn 1966: 169; Jorink 1999: 13).

On the other hand, journals kept by European Arctic explorers generally provide reliable environmental data, because the safety of the crews who kept them and the ultimate significance of the expeditions they recorded depended on their accuracy. Landscapes sketched by explorers approximately match the way they really appear, maps drawn after expeditions

were often remarkably accurate, and reports of fauna or flora were reliable enough to encourage the development of profitable whaling and fishing industries. Even fanciful descriptions of mermaids or other mythological beings can, for environmental historians, provide hints as to the kinds of animals explorers encountered but misinterpreted. Ultimately, most early modern journals of polar exploration, when read with an appreciation for historical context and expected audience, can provide dependable new data for climate historians. Among these journals, some of the most continuous and descriptive were kept by Hudson and his crew.

Climate Change and the Search for an Eastern Passage. The Expeditions of 1607 and 1608

In the early seventeenth century, Dutch merchants and mariners were swiftly outpacing their English rivals in the quest for greater access to Russian and Asian markets (De Vries & Van der Woude 1997: 377). In that context, the discovery of a northern passage offered hope to English merchants. Geographers estimated that such a route would be shorter than its southerly alternative, and securing it for England would upend the country's unequal commercial relationship with the Dutch Republic. Consequently, English merchants were only briefly daunted by the failures of English and Dutch explorers in the late sixteenth century to locate such a route. In 1607, the English Muscovy Company commissioned Henry Hudson to find a passage through the ice near the recently charted island of Spitsbergen, part of the Svalbard archipelago that lies halfway between Norway and the pole (Fig. 2). From there, Hudson and the organizers of his expedition hoped that warmer temperatures would allow an easy journey across the pole, and ultimately towards Asia (McCoy 2012: 95; Thomson 1975: 62).

According to the Julian calendar then used in England, on 1 May 1607 Hudson and eleven crewmen departed London aboard the little bark *Hopeful*. Struggling against contrary winds, by 30 May they had only reached approximately 61° 11' N, not far from the northern coast of Shetland Island. Thereafter progress was quicker. On 13 June they reached the eastern coast of Greenland, and their sails were coated in ice. They were soon engulfed in a dangerous north-easterly gale that threatened to wreck the *Hopeful* on Greenland's coast, but the weather moderated by 18 June. Two days later the explorers, now at 70° N, spotted sea ice for the first time. They set their course away from Greenland and towards Spitsbergen, sailing through fog amid great floes of drift ice driven south by the Transpolar Drift (Fig. 1 and Fig. 3) (Hudson & Playse 1860: 8; García-Herrera *et al*. 2003: 14; Thomson 1975: 63).

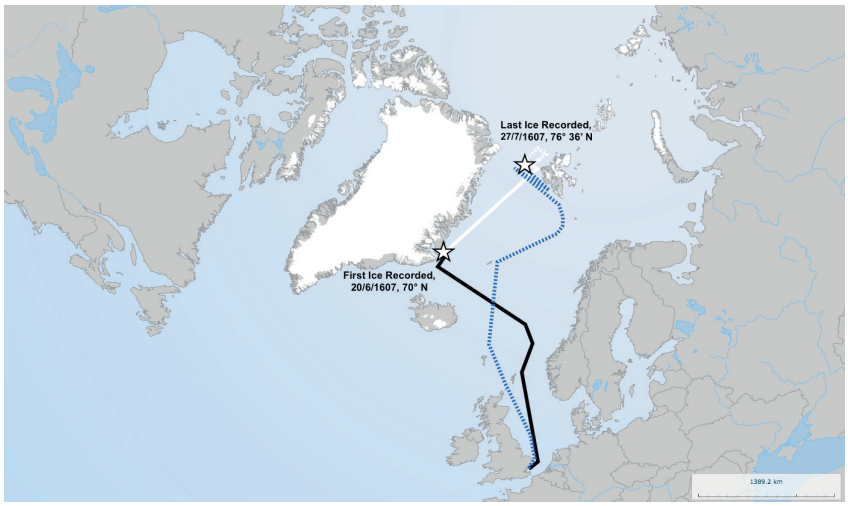

Fig. 3. The course of the first Hudson expedition to the Arctic. The outbound voyage is in black, while the return trip is shown in blue dashes. The portion of the voyage during which sea ice was either certainly or probably encountered is depicted in white (solid for the outbound journey, and dashed for the return trip). White stars denote when and where ice was first and last encountered ("Inter-Map," Arctic Portal Library; http://library.arcticportal.org/1494; access date 13 January 2015).

In a journal written jointly by Hudson and crewman John Playse, an entry on 27 June reported "ice laying very thick all along the shore" of Spitsbergen. On 28 June, they had manoeuvered the *Hopeful* between the ice and the shore, but on the following day they were again confronted with a ferocious storm. The storm had abated by the evening of 30 June, and thereafter the mariners slowly and haltingly pressed north, despite the continued presence of sea ice that, at times, surrounded their ship. On 12 July they had reached the northern coast of Spitsbergen at 80° N. That afternoon they were becalmed and in thick fog, as the current slowly drove them towards nearby pack ice. "It pleased God at the very instant to give us a [breeze]," their journal recounts, "which was the meanes of our deliverance." The explorers could not find passage through the ice, but they did record warm temperatures and many whales, as well as abundant fauna and flora on the shore. Hudson and his crew meandered south along the western coast of Spitsbergen, before bearing for England in late July. At 78° 82' N on 16 July, the mariners ceased to continuously describe visible ice, although their last encounter with sea ice took place on 27 July, at approximately 77° 36' N (Fig. 3). They returned to London on 15 September 1607 (Hudson & Playse 1860: 22).

The first expedition led by Hudson sailed further north than any voyage recorded by European explorers, and Hudson's descriptions of abundant

whales off Spitsbergen contributed to the rise of a large and destructive whaling industry. Hudson's expedition and its consequences were products of seventeenth-century cultural and economic structures leveraged by human agency, but they were also influenced by complex interactions between global, regional, and local environments. In Northwestern Europe, 1607 was unusually warm in the context of the generally cool Grindelwald Fluctuation, and the journal kept by Hudson and Playse suggests that unusually temperate conditions were also felt in the vicinity of Spitsbergen (Van Engelen, Buisman & Ijnsen 2001: 112). This meteorological anomaly was compounded by a peculiar manifestation of the Grindelwald Fluctuation in the far north. Relative to twentieth-century averages, its summers were not as cool as its other seasons, although the shift from the warmth of summer to the chilliness of autumn was more extreme. Moreover, although the Gulf Stream was, on average, ten percent weaker during the Grindelwald Fluctuation than it is today, the greater warmth of the West Spitsbergen Current likely also contributed to reduced sea ice near Spitsbergen (Zeeberg 2002: 66; D'Andrea *et al*. 2012: 1007; Crespin *et al*. 2009: 394; Crespin *et al.* 2013: 327). Accordingly, despite the cool climate, in 1607 counterintuitive but mutually constitutive relationships between the atmosphere, hydrosphere, and cryosphere near Spitsbergen favoured Hudson's deep incursion into the Arctic. On the other hand, very high or very low winds repeatedly imperilled the voyage of 1607, although shifts in the frequency of these conditions cannot yet be tied to LIA climate change in the Fram Strait.

The merchants of the Muscovy Company were hardly discouraged by the outcome of Hudson's voyage in 1608, but they did forego further exploration of the Arctic north of Spitsbergen in favour of an expedition to the seas around Novaya Zemlya (Fig. 2). Previous explorers financed by Dutch and English merchants had reached as far as the northeastern tip of the Novaya Zemlya and the Kara Sea, but despite braving great hardships they had uncovered no ice-free passage to Asia. Hudson therefore set sail earlier in the year than his predecessors, departing London aboard the *Hopeful* on 22 April 1608. Hudson and his financiers likely believed that greater time in the north would yield more opportunities to scour the ice for a passage, and more chances to avoid the failures of previous expeditions (Hudson 1860*b*: 23; McCoy 2012: 98; Day 2006: 137; Thomson 1975: 63).

Hudson was now the sole author of his journal. As the *Hopeful* sailed up and around the coast of Norway in late May, he described weather that, even for the high latitude, was persistently and unusually frigid. Hudson reported that "my carpenter was taken sicke [...] and three or foure more of our companie [...] I suppose by meanes of the cold." It was still abnormally cold when the ship rounded the North Cape, the northernmost point

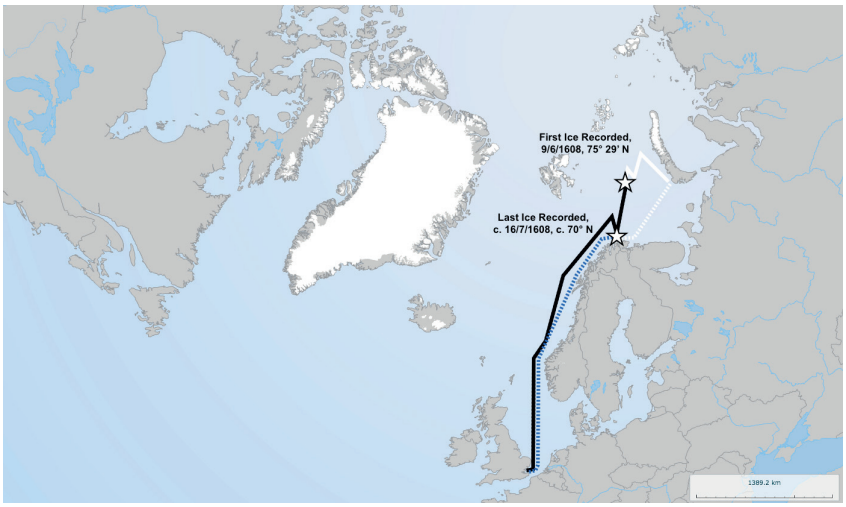

Fig 4. The course of the second Hudson expedition to the Arctic. The outbound voyage is in black, while the return trip is shown in blue dashes. The portion of the voyage during which sea ice was either certainly or probably encountered is depicted in white (solid for the outbound journey, and dashed for the return trip). White stars denote when and where ice was first and last encountered ("Inter-Map," Arctic Portal Library; http://library.arcticportal.org/1494; access date 13 January 2015).

of Norway, and entered the Barents Sea. However, by the time the expedition encountered its first sea ice on 9 June, the crew had recovered (Fig. 4). According to Hudson's measurements, they had reached 75° 29' N, and were approximately 200 kilometres west of Novaya Zemlya. They pressed on until the ice would permit no further passage, and it was only with damage to the ship that they managed to retreat to open water (Hudson 1860*b*: 27).

Despite repeated attempts to sail around the north coast of Novaya Zemlya, the pack ice forced the *Hopeful* further south, until on 25 June Hudson concluded that "our hope of passage was gone [by] this way," owing to the "abundance of ice." Manoeuvering through the ice, the mariners reached the Strait of Proliv Kostin Shar, on the southwestern shore of Novaya Zemlya. They were more than 160 kilometres north of the entrances to the Kara Sea that had been charted in previous expeditions. Hudson and his crew braved the ice driving from the strait to explore whether a nearby river flowed into the Kara Sea. On 5 July, three days after nearly being crushed by ice, they discovered that the river led nowhere. Hudson concluded that he was now "out of hope to find passage by the north-east." Midway through June, the mariners left the pack ice behind, and they returned to London on 7 August (Hudson 1860*b*: 44; McCoy 2012: 98; Thomson 1975: 63).

In his second voyage, Hudson did not come close to entering the Kara Sea and repeating the accomplishments of his sixteenth-century predeces-

sors. This failure was influenced by very different environmental relationships than those that had contributed to his more promising first expedition. In Northwestern Europe, 1608 was an extremely cold year even in the context of the Grindelwald Fluctuation, and Hudson's journal indicates that unusually frigid temperatures also extended into the Arctic (Van Engelen, Buisman & Ijnsen 2001: 112). A winter that was among the coldest of the LIA was followed by a chilly summer, and these atmospheric conditions contributed to the sea ice that barred Hudson's way. The climate of the Grindelwald Fluctuation raised the likelihood of such extremely cold years. Interactions between climate, weather, and local Arctic environments were again mutually constitutive, but in 1608 that synergy was very different in the vicinity of Novaya Zemlya than it had been in the seas near Spitsbergen a year earlier. The influence of environmental conditions unfavourable for Arctic exploration was compounded by the second expedition's early departure. Despite the relative warmth of early summer, sea ice in the Arctic actually reaches its nadir in autumn, after many months of thawing. By leaving in spring, the mariners actually confronted far more sea ice than they would have, had they left later. In 1608, seemingly clear connections between a cooler climate, frigid weather, extensive sea ice, and Hudson's failure were therefore not so straightforward. The second voyage had no chance of charting a passage to Asia, but it could have reached deeper into Arctic waters had the explorers made different decisions. Overall, during Hudson's first two expeditions the different regional consequences of a generally cool global climate altered the course of northern exploration, and helped shape the future European exploitation of the Arctic.

Climate Change and the Search for a Western Passage. The Expeditions of 1609 and 1610

After the failure of Hudson's second voyage, the merchants of the English Muscovy Company had little interest in financing further expeditions. On the other hand, as early as 1603 the leaders of the much larger and more profitable Dutch East India Company had committed themselves to preventing foreign agents from discovering a northern passage to Asia. Merchants of the Company's Amsterdam chapter sought to hire Hudson in the winter of 1608–1609, thereby hoping to foil English attempts at finding a passage while possibly uncovering one for their own use. They were justifiably suspicious of Hudson's assurances that the Arctic climate had warmed after he travelled beyond 80° N in his first journey, but Plancius assuaged their fears. The VOC eventually hired Hudson to chart a northeastern passage, and on 25 March 1609 Hudson and his crew of 16 departed Amsterdam aboard the small ship *Halve Maan* ('Half Moon'). Their express orders were to seek a

route to Asia in the vicinity of Novaya Zemlya (Juet 1860: 45; Murphy 1909: 17; Thomson 1975: 66).

Hudson may never have had any intention of following these instructions. When the explorers reached the northernmost point of Norway in the third week of May, crewman Robert Juet, who kept the expedition journal, wrote that they had "much trouble, with fogges sometimes, and more dangerous of ice." In a blizzard on 19 May, dissent bordering on mutiny erupted among the half-Dutch, half-English crew. Hudson responded by suggesting that they undertake what he had probably desired since leaving port: the search for a passage in milder latitudes, to the southwest (Fig. 5). The *Half Moon* ultimately sailed into what is now called the Hudson River in New York State. Its crew did not uncover a passage to Asia, but did chart the future site of New Amsterdam for the Dutch. Hudson was forced by his English crew to stop at Dartmouth on his return voyage to Amsterdam, and King James ordered him to remain in the country and cease his service to the Dutch (Juet 1860: 48; Murphy 1909: 33; Thomson 1975: 68; McCoy 2012: 99).

The course of Hudson's third expedition reveals again that the influence of a generally cooler climate did not determine the outcome of early modern Arctic exploration. Documentary sources suggest that 1609 was an unusually warm year in the context of the Grindelwald Fluctuation in northern Norway (Van Engelen, Buisman & Ijnsen 2001: 112). Nevertheless, Hudson's third expedition left very early in the year, and its crew verged on mutiny during a spate of cold, dangerous, and altogether discouraging weather. Relationships between local environmental circumstances and human agency therefore helped shape the outcome of the voyage, even if broader connections cannot be established between climate and the decisions of the explorers. Still, cold weather and ice had not daunted Hudson so easily in his previous voyages, and even after the mutiny Hudson was not obligated to propose a course he had secretly already wished to pursue.

While Hudson's third expedition, like his first, failed to find a passage to Asia, it did yield valuable information that encouraged enterprising English merchants to fund subsequent voyages. In 1610, three wealthy and enthusiastic members of the English gentry commissioned Hudson to chart a Northwest Passage through the Canadian Arctic, in the ice that had foiled earlier attempts by Martin Frobisher, John Davis, and other explorers. Strong westerly currents encountered by Hudson's predecessors in the channel between present-day Baffin Island and Quebec had convinced him that a great sea lay not far to the west (Fig. 2). On 17 April 1610, Hudson left London aboard the *Discovery*, a little ship of just 55 tons that would carry 20 crewmen and two boys. The expedition journal, which Hudson wrote himself, first recorded sea ice on 3 June, when the *Discovery* approached the

southeastern coast of Greenland (Fig. 6) (Hudson 1860*a*: 93; Savours 1999: 19; Thomson 1975: 71; Neatby 1958: 16; McCoy 2012: 99).

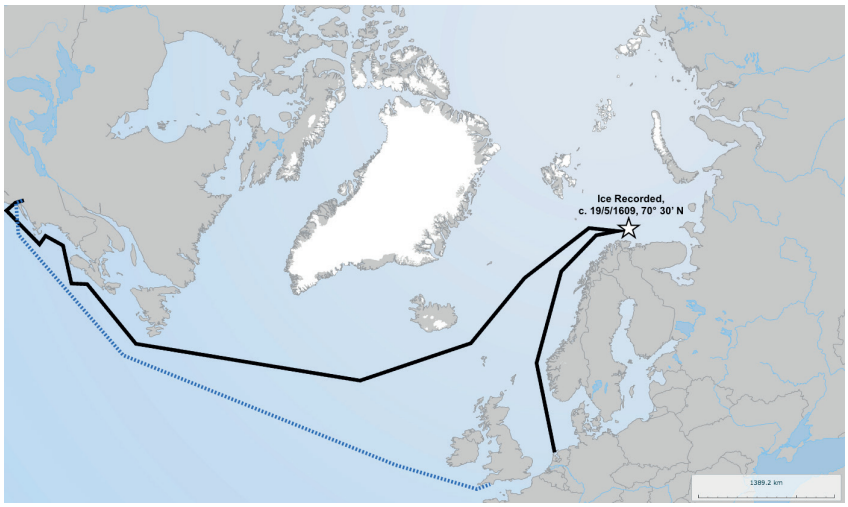

Fig 5. The course of the third Hudson expedition to the Arctic. The outbound voyage is in black, while the return trip is shown in blue dashes. The white star denotes when and where ice was encountered ("Inter-Map," Arctic Portal Library; http://library.arcticportal.org/1494; access date 13 January 2015).

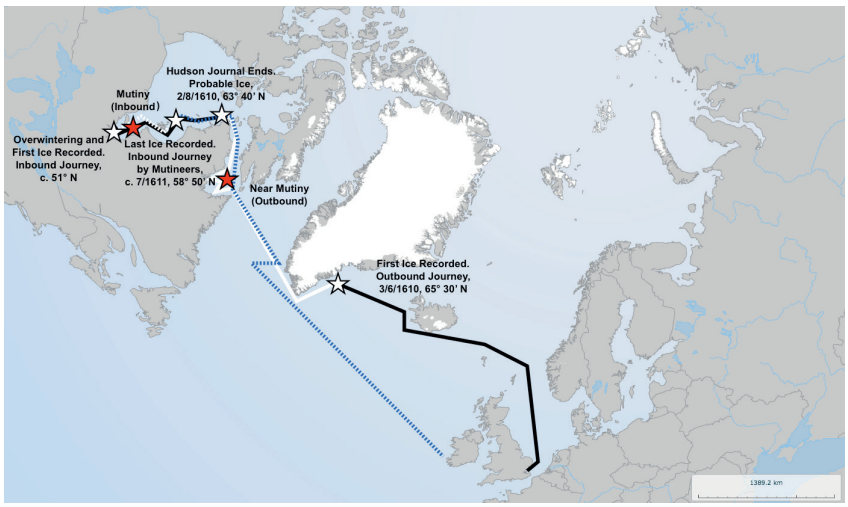

Fig 6. The course of the fourth and final Hudson expedition to the Arctic. The outbound voyage is in black, while the return trip is shown in blue dashes. The portion of the voyage during which sea ice was either certainly or probably encountered is depicted in white (solid for the outbound journey, and dashed for the return trip). White stars denote when and where ice was first and last encountered during the expedition under Hudson and the return trip by the mutineers. Red stars denote where mutinies or near-mutinies occurred ("Inter-Map," Arctic Portal Library; http://library.arcticportal.org/1494; access date 13 January 2015).

Soon thereafter, as the *Discovery* entered what is now called the Hudson Strait, its crew was alarmed by perilous icebergs. In a storm the mariners sailed into pack ice near Akpatok Island, in the seas between Quebec and Baffin Island, and their plight seemed hopeless. The crew was now near mutiny, and only narrowly did a majority vote to press on. The current eventually allowed them to escape the ice, and thereafter they sailed through the passage between what Hudson called Cape Wolstenholme and Cape Dudley Digges, into what is now named the Hudson Bay. A landing party discovered preserved geese that had been stored by local Inuit, but Hudson, believing they had found their passage to Asia, insisted that they press south instead of wasting time to collect these victuals. They were now in uncharted seas. Sailing near the coast, they left the ice floes behind until they were abruptly confronted by the southern limit of Hudson Bay. By then it was October, and they had little choice but to find shelter for the winter. On 10 November they were frozen in, and after a winter of extreme hardship the crew mutinied in earnest when their food ran out. In June 1611, the mutineers abandoned Hudson, his son, and those too sick or too loyal to be of service, before sailing towards the geese they had encountered precisely a year earlier. They were ambushed while trading with Inuit at the entrance to Hudson Bay, and only eight crewmen returned to England (Hudson 1860*a*: 95; Pricket 1860: 113; Savours 1999: 19; Day 2006: 139).

The surviving crew were tried, but their experience in the Arctic made them valuable, and all were ultimately acquitted. Mysteriously, Hudson's journal ended on 2 August 1610. The only record of the rest of the expedition was written by Abacuk Pricket, one of the mutineers. Together, both documents record how environmental relationships influenced Hudson's last expedition. The winter of 1609–1610 had actually been mild in the Canadian Subarctic, and relatively warm temperatures may have influenced the melting of sea ice in the Hudson and Davis Straits. That might have helped the explorers enter Hudson Bay, although they were still confronted by sea ice. In each of Hudson's last three expeditions, crews either mutinied or were close to mutiny only when they encountered thick sea ice that endangered their journey (Hudson 1860*a*: 97; Thomson 1975: 84; de Champlain 1907).

In early 1610, Hudson overcame his crew's first expression of dissent. However, the rest of that year was probably unusually cold, and in October the expedition was confronted by a sharp transition between summer warmth and autumn chilliness. The salinity and currents of Hudson Bay both ensured that it froze over quickly, and that sea ice would linger in its southern waters. Had Hudson allowed his crew to gather geese at the entrance to Hudson Bay, he might have avoided a mutiny in the spring that was provoked both by the threat of sea ice and the prospect of starvation.

Clear relationships therefore existed between weather, local environments, and human agency during Hudson's final voyage, but the influence of the prevailing climate is more difficult to discern. Easier to detect is the historical significance of the mutiny amid sea ice, which prevented Hudson from charting the west coast of what was subsequently named Hudson Bay. That encouraged further expeditions by those seeking a western passage, and ultimately led English adventurers to the peoples and harbours that would support a regionally transformative fur trade. By affecting Hudson's third and fourth voyages, dynamic regional environments, shaped by complex interactions with global climatic trends, ultimately influenced the colonization of North America.

Conclusions. Broader Contexts and Modern Relevance

Because the world's climate today is unstable, interdisciplinary scholars usually reconstruct past climatic fluctuations with reference to the early twentieth-century climate. However, historians interested in the human consequences of climate change typically compare decade-scale climatic regimes in defined geographic spaces to the warmer or cooler climates that immediately preceded or followed them. In that context, this analysis of the Hudson expeditions has provided new insights into relationships between moderate climate change and human activity, which even in extreme environments were never straightforward.

However, climate histories of the Arctic also demonstrate that understandings of the connections between climate change and human history can take on a new light when the regional environmental manifestations of very different climatic regimes, often separated by centuries or millennia, are compared. The extent to which both "old" and "new" ice have retreated in recent decades is demonstrated by juxtaposing satellite measurements of modern Arctic sea ice with maps of sea ice recorded in Hudson's journals (Fig. 7, Figs. 3–6). In today's climate, the distribution of summer sea ice would not have prevented the traverse of a Northeast Passage in 1608, and would not have kept Hudson from leaving the bay that is his namesake in October 1610 (Fig. 7). In fact, the extent of summer sea ice between Greenland and Svalbard recorded by Hudson in his first expedition roughly matches regional sea ice extent in December 2014. That remarkable similarity demonstrates the scale of climate change since the Little Ice Age, considering the great difference between winter and summer sea ice extent in the Arctic. The Hudson expeditions therefore illustrate not only the possibilities but also the limitations of nuancing climate histories of the Arctic and Subarctic, given the extremity of environmental change in these regions in recent times.

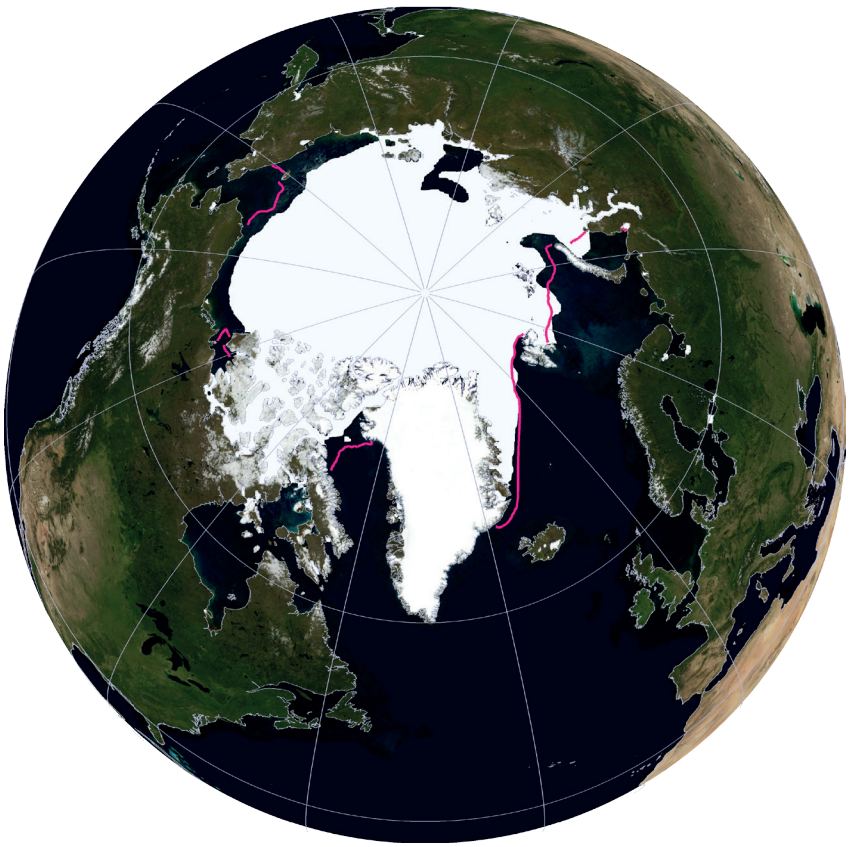

Fig. 7. Sea ice in October, 2014. The 1979–2000 mean sea ice extent is outlined in pink (National Snow and Ice Data Center).

Nevertheless, for climate historians journals kept during the Hudson expeditions show that relationships between climate change and human history were complex and often counterintuitive even in the most extreme environments. Broad constraints to human action existed in the context of the Grindelwald Fluctuation, but local or regional environmental expressions of a cooler climate could actually provoke polar discoveries. Moreover, warm years could interrupt even the coldest decades of the LIA, opening new environments for discovery and exploitation. Ironically, declensionist and determinist narratives are undermined by studying human history in an extreme environment that responds to climate change more dramatically than anywhere else on earth.

Historians of the Arctic and Subarctic have usually concluded that early modern journeys in search of a northern passage to Asia failed in a frigid

and therefore hostile environment. However, the Hudson journals show that dynamic regional environments could affect human action, enabling important discoveries that ultimately had great significance for the environmental and social history of the far north. A middle ground must be found between histories that examine human agency but ignore influential changes in the natural world, and narratives that privilege environmental forces over people who were always free to choose between different responses. This article demonstrates that such a middle ground can only be mapped by using a rigorous methodology for dissecting the relationships that bind climate change to human history. It reveals that this methodology is most effective when it is applied to detailed sources that, like Hudson's journals, were written in environments clearly shaped by climate change. Ultimately, this climate history of the far north highlights the importance of a balanced approach when projecting future climate change. Climate change is happening, but humans are free to choose how they will respond.

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The Emerging Arctic Humanities

A Forward-Looking Post-Script

We live in troubled times, and so does indeed the Arctic. So, what about Arctic scholarship? As this set of articles demonstrates the opposite may be true. These fine examples of historically informed research on important features of Arctic environments, economics, ideas, and aesthetics are evidence of a broadening movement to draw the Arctic firmly into the domain of the humanities and of a new integrative writing about environment, history, and future through the lens of the politics of the present. They prove that there are humanities for the Arctic.

This may seem an obvious comment, but it is rarely made. Of course, nobody could doubt that the Arctic has been inhabited since time immemorial. Nor could anyone dispute the presence or significance of religion, music, and history within Northern indigenous cultures. Indeed, significant scholarship has been carried out in Arctic languages, anthropology, archaeology, ethnology, and other disciplines, many of which are usually considered as part of the humanities.

For a long time, however, this scholarship was considered a marginal phenomenon in relation to the massive efforts in what was always called Arctic "science," a concept that followed on the heels of the earlier Arctic, or polar, "exploration" (Levere 1993; Bravo & Sörlin (eds.) 2002). Despite a certain presence in some academic departments and some museums of Arctic culture—one of the most significant collections being built in Copenhagen through Denmark's colonial relationship to Greenland (Thisted (ed.) 2005)—the humanities were really very small by comparison. The massive research effort during the International Geophysical Year 1957–1958, which privileged the poles

and counted as the third of the hitherto four "polar years," mobilized some fifty thousand scientists from more than sixty countries—virtually none of whom was a humanist (Krupnik *et al*. 2005).

This has now changed. The Fourth International Polar Year, which in reality covered three calendar years, 2007 to 2009, counted about one-third of its scientists and scholars from the humanities and social sciences (Krupnik & Hovelsrud *et al.* 2011). Considering that the population of the region north of the Arctic Circle is no larger than four million people, less than the total population of even some of the smaller polar states, such as Denmark and Norway, the Arctic now draws considerable scholarly interest, not least among historians (e.g. McCannon 2012; Farish 2013; Sörlin (ed.) 2013; Jørgensen & Sörlin (eds.) 2013; Christensen, Nilsson & Wormbs (eds.) 2013; Dodds & Powell (eds.) 2014; JHG 2014), surpassing anything we have seen in the past. The present forum is a case in point.

Why is this? Clearly, there have been concerted efforts in many countries to promote a broadened Arctic scholarship. Research councils and other funding agencies and foundations have set up initiatives to move the contributions of the humanities and social sciences forward. When the International Arctic Social Science Association (IASSA) was founded at a meeting in Fairbanks, Alaska in 1990, it saw no need to articulate a specific role for the humanities; they were somehow tacitly subsumed and included, although they have taken an increasingly prominent role in recent years. IASSA was part of the preparations for one of the largest funding initiatives for transnational Arctic humanities and social sciences, the European Science Foundation's BOREAS programme. Organized through ESF's multinational structure of coordinated resources, this programme ran from 2006 to 2010, thus encompassing the IPY. Recently the Nordforsk agency, based in Oslo and uniting all the Nordic countries including Greenland, initiated a programme to build several Centers of Excellence across the Nordic region, with the humanities clearly visible and signaled as on a par with science, medicine, social science, and technology.

Still, none of all this would probably have happened unless there had been a sense that something was missing from the usual range of knowledge. In a recent article that reflected on the rapid rise of the Anthropocene as a concept and a frame of understanding, some of us made the observation, in the light of the growth of an environmentally activist "planetary science," that "there is no planetary humanities" (Pálsson *et al.* 2013: 11). At the same time, the article was meant as a plea for precisely this. In order to understand the discourses of the planetary, and to navigate an increasingly planetary era of integrated fates of nations, cultures, economies and environments, there is an urgent need for a humanities that can address these

issues and decipher their meaning and underlying patterns of power, ideologies, and directions. We did not think that natural science or conventional predictive social sciences (Andersson & Rindzeviciute (eds.) 2015) alone would suffice.

We deliberately took the role of a Minerva's owl, wishing to offer a word of caution as the human enterprise was moving towards what seemed a global dusk. But, in retrospect, and as so often is the case, we were perhaps already being overtaken by newer tendencies in the humanities that took precisely this planetary view, proudly proclaiming concepts such as the "environmental humanities" (Rose *et al.* 2012; Sörlin 2012; Sörlin 2013) or the return of the "long term narrative" (Guldi & Armitage 2014; see also Chakrabarty 2009), none without an appropriately broadening and critical discussion (on Guldi & Armitage, e.g. Cohen & Mandler 2015). A new kind of humanities seems already to be emerging, to which many contribute, and that relies on the classical virtues of the humanities fields. At the same time, the new humanities insist on a new relevance and a sense of urgency that is crucially, albeit far from solely, about the planetary. This programmatic side of the new humanities, which we might term grand scale and challenge oriented, is necessary. But we must remember to pay attention to the local, the individual, the precise, rather than give in entirely to the sweeping, the overly broad, and precisely therefore less sharp; the *un-gefährlich*.

It seems to me that we are seeing a similar development occur with regard to the humanities in the Arctic. There used to be no concerted humanities of, for or even about the Arctic, at least not taken as a whole. There did not seem to be any common issues. Nor was there any common agenda, at least not one that the humanities seemed fit to deal with. The humanities needed to start their own change first, navigating rapidly transforming university systems (Collini 2012). Planetary change, tremendous challenges, looming threats and fabulous opportunities have, somewhat bewilderingly and often quite illogically, been proclaimed for the Arctic ever since the short period of peaceful region-building in the North (Keskitalo 2004) came to an abrupt end in the early years of the new century. Whatever lasting truth there may be to these grandiose statements there has been enough of *Realpolitik* to this rhetoric to make a response meaningful. Perhaps the most forceful of all academic response has come from the humanities, and certainly the least expected.

Just as we have seen the emergence of the environmental humanities as a reflection of the *planetary* crisis, I think we should also see the intense and careful humanities scholarship currently emerging on the Arctic as the legitimate outcome of an *Arctic* crisis. What may seem a new gilded age of golden opportunities and a bonanza of minerals and fossil fuel resources on

the Arctic rim is in reality a period of utmost stress and profound shake-up of cultures and societies facing global change with the added challenge of what has been called an "Arctic amplification" (Bekryaev *et al.* 2010; Pithan & Mauritsen 2014). Thus, we begin to see reinterpretations of the standard narrative, renegotiating the relationship of the Arctic local with the global (Hastrup 2013), and drawing the long lines of Arctic security (Doel *et al.* 2014), precisely the kind of work that the humanities are increasingly suited for and now also seem willing to do.

Most of this work has yet to come; it is emerging literally as I write these lines. But so much has been coming forth during the last few years that it is fair to say that we have entered the time when we can rightfully talk about our work as a scholarship of Arctic humanities. The papers in this forum truly mirror this emerging body of work, self-consciously addressing the environmental history—in its broadest sense—of the Arctic in innovative ways. The themes they bring out—that of commodification of vulnerable nature turned icon (the iceberg), that of languages of extraction through the invention of Arctic business models, that of the proto-politics of climate change during an era of cooling rationalizing early modern colonial presence, or that of Arctic futures, constantly reinvented to suit economic expansionism—all these themes call for new and innovative narratives of the Arctic region; more precisely, reinterpretations. As we read them we realize that they require broad, integrative knowledge gleaned from many disciplines, as well as imagination and awareness of the larger scheme of things in which Arctic change happens. They thus also speak to the responsibility of the Arctic humanities, not only to live up to the highest possible scholarly norms, but also to bring the insights from the archives and the field to bear on current debates.

A forum like this one does not appear *ex nihilo*. Several good initiatives over the last decade or two laid out some of the fine Arachne threads that can now be collected and woven into wider webs of wisdom. Nonetheless, it is the indispensable mission of insightful and visionary editors to see the opportunities, grasp the loose ends and bring the appropriate talent to the task. It bodes well for the emerging Arctic humanities to find their leaders among a truly international cohort of early career scholars.

This forum will serve as yet another stepping stone towards what will not only be a better and more nuanced understanding of the Arctic, but also the dusk of the long day of Arctic exceptionalism, when this part of the world was largely seen as a reserve for those who studied nature, mostly in splendid isolation. Those scientists did admirable work, and it is their ice cores, climate data, sediment measures, and readings of the buoys that now get a second lease on life as they are taken up and integrated into human

story lines and social explanations. Likewise, humanities from other regions of the world become relevant. The Arctic of the new humanities faces outward, to the tropics, the oceans, the deserts, the plains, and the cities. It is not different. Like "every man" in John Donne's poem, the Arctic "is part of the main." Arctic humanities, like the environmental humanities, will work well only if they work in lock step with the humanities elsewhere. Ours is a time when also the exceptionalism of humanistic forays into the Arctic should be coming to a close.

Our times may be troubled, but the Arctic scholarship we see reflected in these papers and the editorial craftsmanship that brought them to us should not trouble us. On the contrary, they make me confident that there is salvation in sight.

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Review essay

Changes in the Attribution of Values to Northern and Arctic Spaces

Silje Gaupseth, Marie-Theres Feerhofer & Per Pippin Aspaas (eds.), *Travels in the North*, Hannover: Wehrhahn Verlag 2013, Troll Band 13, Tromsø Studien zur Kulturwissenschaft, ISBN 9783865253347, 230 pp.;
John McCannon, *A History of the Arctic. Nature, Exploration and Exploitation*, London: Reaktion Books Ltd. 2012, ISBN 9781780230184, 349 pp.;
Martin Breum, *Når isen forsvinder. Danmark som stormagt i Arktis, Grønlands rigdomme og kampen om Nordpolen*, København: Gyldendal 2013, ISBN 9788702138023, 316 pp.;
Barry Scott Zellen (ed.), *The Fast-Changing Arctic. Rethinking Arctic Security for a Warmer World*, Calgary: University of Calgary Press 2013, ISSN 1701-0004; co-published by the Arctic Institue of America, ISBN 97815523-6460, 395 pp.;
Miyase Christensen, Annika E. Nilsson & Nina Wombs, *Media and the Politics of Arctic Climate Change. When the Ice Breaks*, Houndmills, Basingstoke, Hampshire UK: Palgrave Macmillan 2013, ISBN 9781137266224, 182 pp.

Global climate change and in particular the retreat of sea-ice in the Arctic is focusing attention on the High North and its polar environs. Issues of resource exploitation, ownership of land and sea passages as well as concern about protecting the environment and aesthetic wilderness values have become topics of debate, revealing the conflicting values that are attributed to Arctic spaces. In this connection one can also see a growing literature wherein changes in such values, both in the past and the present are traced and discussed. This review takes up five books that deal with these issues. Some provide historical accounts of polar exploration and science, of Arctic nation-building, the northern environment and the roles of indigenous peoples for whom the circumpolar world provides both habitat and livelihood. One book focuses on changing perceptions and imagery as reflected in contemporary media reportage. There are also travelogues written by a journalist and accounts by scholars in the social sciences and humanities who give thought to ongoing political trends and the struggle over potential riches as well as the question of who stands to benefit and who may lose out.

The volumes reviewed represent samplings from many overlapping fields, including literature studies, history, political journalism, the writings of political scientists and experts in military-strategic studies, media studies, history and politics of the environment and climatology, and the history and social studies of science and technology.

Students of literature, more than earlier, are now focusing critical attention on literary aspects of travel and exploration in a field that has traditionally been dominated by the historical discourse. A good example of this is the volume entitled *Travels in the North* (eds. Gauspeth *et al.*). It is the outcome of a symposium with the same title held in 2011 in a cooperation between the multi-disciplinary research group *Narrating the High North*, and the C*entre franco-norvégien en sciences sociales et humaines* of the *Fondation Maison des Sciences de l'Homme* in Paris. The volume includes eleven chapters several of which deal with representations of natural and cultural phenomena in the North as articulated in travel writing, documentary literature and scientific texts from the tenth to the twentieth centuries. Some chapters throw new light on the characters of past explorers such as the Norwegian Fridtjof Nansen who is usually depicted as a self-confident, steadfast, science-based, invulnerable hero. Others recover unknown figures from the annals of history, as Mary Katherine Jones does in her contribution about the French naturalist Charles Rabot, longtime editor of a French geographical journal who lobbied for Norwegian claims to sovereignty over Spitsbergen at the Paris Peace Conference of 1919.

Silje Solheim Karlsen challenges the traditional heroic image of an impersonal Nansen that harks back to the nineteenth century. On the basis of a close reading of his expedition accounts, like *Farthest North* (1897, from the famous *Fram* expedition), she finds him a much more complex character with a softer emotional, romantic and questioning side that leads him to appeal not so much to science as to personal and nationalist allusions, whereby he "stages himself as a modern polar hero between rationality and romanticism." Peder Roberts contextualizes and discusses the exploits of another lesser-known figure, Gino Watkins, who, together with his Oxbridge companions, went to Greenland and Labrador in the late 1920s and early 1930s. Roberts notes how their upper-class upbringing influenced their ambivalent relationship with Inuit women, which was both commandeering and erotic. Silje Gauspeth dissects Vilhjalmur's self-representation and his argument that what other explorers in the Arctic saw as a forbidding space was in fact a bountiful place if approached in the right (that is the Inuit) way. She analyses the hero's compositional and rhetorical strategies in his classic northern opus, *The Friendly Arctic* (of 1921).

A further chapter traces the values projected by North Frisian whaling captains and commanders in narratives of their whaling exploits and encounters with "the Eskimo" (Maike Schmidt). Historians of science will especially appreciate a chapter that throws new light on the history of seventeenth and eighteenth century impressions of the Northern Lights or "northern dawn" (*aurora borealis*) and various early attempts to explain the phenomenon (Per Pippin Aspaas). Aspaas refers to no fewer than five different theories and discusses their varying social epistemological roots in a counter-positioning between natural philosophers situated in the European heartlands and a number of Swedish scientists whose geographical position was on the continent's periphery. He notes how the Scandinavians from their location in the Auroral Zone claimed an observational advantage over their peers further south who, for their part, were wont to dismiss such a claim.

As it is not possible here to go into more detail I have only mentioned those parts of the anthology that have a more immediate bearing on the Arctic. Other parts deal with prejudices of foreign travellers in Scandinavian lands including Lapland, but also the rationale, values and perceptions of the early Norse settlers in Labrador and Newfoundland as reflected in the Vinland Sagas. A prevailing prejudice amongst foreigners from the sixteenth into the eighteenth centuries seems to have been that living conditions deteriorated as one progressed further North. The climate became more harsh, the landscape more hostile, dangers multiplied and the number of people became fewer and fewer, even if those native to the land were often very hospitable (Eric Schnakenbourg). A remarkable review of French images of welfare Scandinavia in the 1930s, that is, Nordic modernity, in the very last chapter, however, emphasizes a picture of consensual pragmatic and harmonious monarchies that well after beginning of the twentieth century afforded an alternative to both unbridled capitalism in the West and Soviet regimentation in the East (Peter Stadius).

Some of the chapters are more uneven than others and the editors have made no attempt to overcome the rather disjointed assembly by tying together the various themes and timelines in a substantial introductory chapter. Nevertheless, considered as a whole the volume makes a valuable and thought-provoking contribution to its special genre.

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John McCannon's book provides the kind of contextual substance that is missing in Gaupseth *et.al*'s anthology. His panoramic overview of natural, environmental, socio-cultural, economic and geopolitical histories

lives up to the title admirably, *A History of the Arctic. Nature, Exploration and Exploitation.* The book is a veritable digest of specialist knowledge on a range of significant topics deftly woven into an account that leads the reader through many intricate changes in the northern circumpolar world that is now home to some 4 million people, about 10 per cent of whom have aboriginal status. We learn of the diversity of indigenous populations in Siberia, Scandinavia and North America and how they adapted to and utilized the resources of their northern environment. We also learn about their encounters with nation-building Europeans who brought catastrophes in the form of epidemic diseases, dislocation, death and suppression of traditional mores and shamanic wisdom and healing practices. In some cases the historical record indicates a cumulative genocide which, from the time of Columbus, saw the decimation of as many as 85–90 per cent of the tribes, clans and communities. McCannon sometimes refers to this dimension in passing, but he is not an anthropologist. His forté is Arctic economic and political history together with exploration and, to some extent, science. He informs us about much of both the early and more recent archaeological and ethnographic research on which is based the latest understanding of the location, movements and life of, for example, paleo-Arctic cultures. We are updated regarding interpretations of the history of Beringia and the influx of Asiatic travellers from Siberia and central Asia across the Bering Land Bridge into North America about 15,000 years ago which was made possible by major events in the climatic and glaciological histories of the northern hemisphere. The first chapter focuses on this background.

The second chapter details the history of the first European ventures into the far north and the encounters with indigenous populations up to the year 1500. It was a process in the course of which Scandinavia and Russia ultimately strengthened their hold on the northeast territories, leading to the start for the search for the Northeast and the Northwest Passages. This latter history, primarily driven by nationalism, avarice and commercial gain, entwined with adventure and scientific pursuits, forms the subject matter of the next two chapters: "Incursions: 1500 to 1800" (Ch. 3) and "Crusades: 1800 to 1914" (Ch. 4). In both cases the focus moves back and forth between the North American Arctic and Greenland on the one hand and Siberia on the other, displaying the history of polar exploration in tandem with colonial transformations and the extension of political hegemonies that left their indelible stamp on both far northern landscapes and the cultures of aboriginal peoples. Included here are national and capitalist company rivalries over the control of natural resources, first furs and fur trading and then logging and mining. These chapters also cov-

er the way in which the adventures and fates of heroic and lesser figures among the Euro-Americans impinged on the consciousness of Western society through the future-oriented imaginaries that were widely disseminated through the power of the mass media and popular literature.

One section in Chapter 4 is subtitled "The Franklin Syndrome." It covers the prelude, the fate and the aftermath of the famous Franklin Expedition and the constant lure of both an open polar sea theory and belief in the existence of a transpolar land stretching from the top of Greenland across the Arctic to Russia's Wrangel Island. Another section, "Boreal Empire," sketches colonization and exploitation in Canada where First Nation and Inuit lifestyles were thrown "into disarray" (p. 143) and the conditions created for their reliance on the new order. Political realignments in Scandinavia, Christianization of the Sami and Denmark's Greenland policy are briefly reviewed, as is the roughshod treatment of a variety of so-called "small peoples" when the Russians steadily expanded from Yakutsk to the shores of the northern reaches of the Pacific Ocean, the Bering Sea and Russian Alaska (held until the US Purchase of the territory in 1867). Two further sections outline the better known subsequent economic and exploration activities across Alaska, northern Canada, Scandinavia and Russia, as well as the "sprints and marathons" of the race to the pole and more systematic modes of exploration. The latter section highlights expeditions associated with the names of A.E. Nordenskiöld, Fridtjof Nansen, Karl Weyprecht, Salomon Andrée, Robert Peary and Mathew Henson, Franz Boas, Otto Sverdrup, Knud Rasmussen and a number of Russian explorers.

Chapter 5 is entitled "Subjugations: 1914 to 1945." The term subjugation refers to a further taming of both nature and peoples through technology and politics. In this period technology, in the form of aviation, added a third dimension the skies above the lands and the seas, making it easier to chart and politically claim new landmasses and waterways. As in the previous chapters the author sweeps panoramically across the various regions of the Arctic, illustrating changes in patterns of geographic claims in the wake of two world wars and natural resource development as well as new modes of exploration during the interwar years.

The Second World War in particular is shown to have spurred infrastructural developments in several regions of the circumpolar world. The chapter also goes into the nitty-gritty detail of major battles in northern Norway, around Murmansk, and the roles of Greenland and Iceland in the contest with Nazi Germany.

One important feature of the book is the detailing of events in the Soviet sphere of power, an aspect that is all too often omitted from other

histories of the Arctic. There is an explanation of how transport, science, resource development and dealings with natives all came into the hands of a multi-purpose agency led by the mathematician Otto Schmidt, who was forced to step down in the late 1930s. A worse fate met the geographer, mining expert and polar explorer Rudolf Samoylovich who had participated in the successful Graf Zeppelin expedition of 1931 and led several expeditions on icebreakers into the Arctic carrying out drift-experiments à la Nansen. He also fell out of favor with Stalin's Moscow leadership and was ultimately executed (he was posthumously rehabilitated in 1988). Soviet contributions to polar exploration and research are presented equally with a variety of Norwegian, Canadian, Danish, German and US achievements associated with better known figures during the entire period covered by the chapter. Differences regarding the ways in which efforts in these countries were organized and linked to geopolitical agendas are also nicely spelled out.

Chapter 6, "Contaminations: 1945 to 1991," deals with the period dominated by the Cold War and outlines how some scientific communities in circumpolar countries benefitted as the Arctic became a playing field for superpower rivalry and militarization. Meteorology, geophysics, oceanography, permafrost studies, glaciology including ice core drilling and climatology advanced on both sides of the iron curtain. On the opposite side of the ledger the author records costs and losses. Environmental degradation followed as pollution spread across the Arctic and radioactive fallout from atomic tests took their toll on ecologies and human lives. Human activity became military-related and "the Arctic itself became a martial landscape" studded with new dockyards in coastal areas, inland airstrips, radar and weather stations.

In many cases indigenous peoples were forcibly moved to new locations and became dependent on incorporation into militarily subsidized economies that ultimately changed lifestyles and broke down traditional cultures. The chapter describes the host of installations that were implanted in the far northern reaches of the US (Alaska), the Soviet Union, Scandinavia, Greenland and Canada and how the militarization "inflicted a tangle of scars on the polar environment" not to mention radiation-induced health complications, particularly in the USSR. The impact of "big oil," both drilling operations and major oil spills, is also highlighted, as are the different ways in which various countries reacted to these developments. In some cases indigenous and environmental concerns evoked the formation of activist movements and NGOs, while in others native peoples gained sufficient leverage to press for aboriginal rights and land claims or autonomy, at least in Alaska, Canada

and Greenland. The uneven development of Sami rights is analyzed in a comparison of Finland, Norway and Sweden, turning the spotlight on the progress made in the former two countries and showing Sweden lagging far behind. The disregard for native rights in the USSR before Gorbachev's Murmansk Initiative speech of 1987 and the subsequent failure to repair half a century of damage already done to the Soviet ecosystem is likewise chronicled.

Chapter 7, "Extinctions? 1991 to the Present," as the title indicates, takes the storyline into the present, documenting recent changes and impacts on the Arctic environment as nations and large corporations scramble to gear up for future oil and gas extraction from the Arctic seabed, while Russia and the US are strengthening military security systems as the ice retreats. The complexities of negotiations and symbolic actions over continental shelf extensions, for example, along both ends of the Lomonosov Ridge are teased out. Canada, Denmark (via Greenland), and Russia each assert that the Ridge is an extension of their own continental shelf. Proof of its continuation would give a state access to the sea bed and natural resources beyond the current 200 nautical mile (nm) limit. The United States, for its part, claims that the Lomonsov is an oceanic ridge and thus not an extension of any state's continental shelf, thereby refuting any claim to ownership. In the new context there is "an arsenal of advanced and precise under-water mapping-techniques now available—including robotic and mini-sub surveying, sonar scans, seismic and aero-gravity probes and satellite surveillance" (p. 291). These techniques, McCannon believes, will assist in the avoidance of gunboat diplomacy, but he sees a greater danger in what he calls "arcticide," that is, the death of the Arctic as we now know it, and not from natural causes. The argument is that this is the consequence of ongoing climate change affecting first the lower orders of life, and then working its way up the food chain causing more and more species to become extinct.

Overall the book provides an invaluably comprehensive overview of changes in the Arctic, past and present. Most pertinent topics and themes are covered, including the place and role of aboriginal peoples over many historical periods. Regarding the annals of polar research and exploration the account is most informative, including many details not found in other overviews of Arctic history. For example we find reference to Sweden's "Professor Ice," Hans W:son Ahlmann and his work with early observations concerning a warming trend in the high north. Incidentally, McCannon incorrectly refers to these observations as "warnings", failing to note that Ahlmann himself spoke at the time of "climate improvement." A smaller but more irritating problem—at

least for the European reader—is the author's constant use of "miles" and "square miles" to indicate distances and areas. Finally, there is one respect in which the account needs to be taken further, that is in presenting the perspectives of the indigenous peoples in the circumpolar world.

In recent times academically trained aboriginals have themselves advanced the theory of historical trauma transmission (HTT). This is seen as a phenomenon that accompanied the effects of colonization with a long-term historical and cumulative impact on indigenous peoples and their cultures in five dimensions: physical (including demographic collapse), economic, cultural, social and psychological. Together these were played out over three periods (early: cultural transition; middle: cultural dispossession; and late: cultural oppression). These writings postulate

> the destruction of cultural autonomy, social integrity and cultural identity, as well as hundreds of years of relentless cultural oppression caused profound changes in the psychological make-up of aboriginal people, discontinuities on interpersonal and communal levels, social and interpersonal conflicts, psychological dissociation on cultural levels, and mental anguish on individual levels (www.ahf.ca/downloads/historic-trauma.pdf).

Like most scholars who have written on Arctic governance and compared the situation to the regime that is in place in Antarctica, John McCannon recognizes that a complete ban on Arctic development, desirable as it might be, is neither legally nor diplomatically feasible. He does, however, refer to the interesting proposal made in 2009 by experts affiliated with the Council on Foreign Relations and the Rule of Law Committee for the Oceans that the highest north, all waters above the 88th parallel, should be cordoned off and set aside as a giant marine park to be administered by the Arctic coastal nations and other nations interested in science.

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Når isen forsvinder by Martin Breum in a sense continues where McCannon leaves off. He focuses on recent developments concerning Greenland. The full title of this Danish book when translated into English is 'When the ice melts. Denmark as a big power in the Arctic. Greenland's riches and the struggle over the North Pole.'

Breum is a Danish journalist who has lived in Greenland and been a correspondent in Africa and supplies media information on developing countries and geopolitical trends. The present book is an update of an earlier issue based on visits to Norway, the Faroe Islands, Iceland, Canada

and Greenland as well as his observations as a participant in a number of expeditions into the Arctic. Travelogues are interlaced with historical reflections, descriptions of polar landscapes and observations on changes brought about by a combination of a new geopolitics and melting ice.

In focusing on Greenland (*Kalaallit Nunaat*, literally, 'The Land of the People') he details many major events while simultaneously allowing it to function as a lens through which to view broader contexts and contingencies. Of the territory's 57,000 inhabitants about 85 percent are of Inuit or mixed Inuit/Danish heritage. In 2008 Greenlanders voted in a referendum for more autonomy; 75 per cent decisively voted yes. In its wake Greenlanders gained greater control over their energy resources, are now counted as a separate people under international law, and the native Inuit language Kalaallisut (Western Greenlandic) has gained official status in place of Danish. Currently the bulk of Greenland's revenues are still made up of Danish grants, but the melting ice has made access to mineral resources more accessible, promising a rich source of future income. Additionally, in October 2013 a 25-year-old ban on mining radioactive materials was lifted. The other side of the coin is that the traditional fishing industry is in the grip of crises; general unemployment is very high, and alcoholism and HIV/Aids are taking their toll in human lives. This situation would be further exacerbated if the prospects of oil, gas and the mining of rare earth minerals, driven by the ups and downs of global markets and new technologies, were to jeopardize the much-needed, steady flow of Danish funding in the future.

Breum's book is timely in that it reports on the important political developments regarding Greenland's new status since its inhabitants gained self-government in 2009. It gives an initiated account of what this implies within a framework where the Kingdom of Denmark retains control over defense and foreign policy on behalf of its neo-colony (the term "Kingdom of Denmark" refers to what in Danish is called *Rigsfællesskabet*, a union of Denmark, the Faroe Islands and Greenland "under the Crown"). One major point is that before 2010 reports on Greenland in the Danish media were rather few, but since then there has been much debate about the vast ice-covered and sparsely populated island and its future. It has become a hot topic that now frequently features in headlines and opinion pieces both in Copenhagen and Nuuk.

Certainly, independence gave Greenland's denizens the power to make decisions about natural resources, including gas and oil under the adjacent seabed, but Denmark has not relinquished its designs to benefit from this economic exploitation. For this reason, as Breum points out, the exact terms and conditions for such exploitation have purposely

been left vague and open to further negotiations when some of the large multinational corporations that already have exploration permits for gas, oil and rare mineral resources actually begin to extract these riches.

At the same time in Nuuk, where leading politicians articulate visions and plans for economic futures, there is also popular criticism of behind-closed-doors deals. The popular concern is that the multinationals involved might very well pursue their own profit-making goals without proper consideration either for the rights of indigenous communities, or the risk of large-scale environmental catastrophes, such as oil spills, in difficult polar waters. Today the necessary infrastructural arrangements needed to deal with such eventualities do not exist.

Breum's book provides an insightful account of the deliberations, stakes and interests, as well as the various twists and turns at negotiation tables and behind the scenes, in the two capitals (Nuuk and Copenhagen) that formed part of the process prior to the present situation.

There is also concern that if Denmark fails to boost its military and security policing system for Greenland so as to underpin the island's independence in a globalizing arena, a power vacuum might emerge where the USA would most certainly step in to prevent other contenders from doing so. Most Greenlanders, it is argued, prefer the present affiliation with the Danish Kingdom over a tighter incorporation under America's wing.

The book is built up around a series of accounts of expeditions. Apart from explaining the rationale for these expeditions, the work carried out and their ultimate purpose, we are also treated to interesting excerpts from conversations with a large number of different experts and leading personalities involved in governance, science and military security and operations such as air and naval sovereignty flights and coastal patrols. In a prologue we initially meet the pilots and crew of a Danish military jet on an inspection flight from the Thule Air Base to the North Pole and back. In a separate chapter we learn of the work and views of the chief scientist and other researchers on a Danish Arctic sea-bottom mapping operation that went to the same spot "at the top of the world." Thirdly, in another chapter we become party to the life and views of officers and experts on board a Danish naval vessel that regularly patrols Greenland's east coast as part of the country's reinforced security and sovereignty-enhancing exercise in the high latitudes.

One is given the perspective of the naval high command in the new Danish Defense Force's (DDF)-Joint Arctic Command (JAC) headquartered in Greenland, that was put in place in October 2012 to reinforce plans to expand the training and deployment of special operations forces to assert Denmark's sovereignty over its Arctic territories. In this sec-

tion of the book interesting comparisons are made with the time of the Cold War and how the present "militarization" differs from that of the past. Between such chapters there are others where we follow at close quarters the political dynamics at various levels from intergovernmental forums such as the Arctic Council, to exchange visits to China and their resonance in Cabinet meetings in Copenhagen and Nuuk.

The scientific expedition covered is that of 2012, known as LOMROG III, which lasted for seven weeks and was a follow up of a similar earlier expedition in a previous year that also used the Swedish icebreaker O*den*. It was leased by Denmark as a platform to cruise to the North Pole. The mission was to map the part of the submarine Lomonosov Ridge that extends northward from Greenland. As I have explained before in the pages of the present journal (*Journal of Northern Studies* 2011, 5:1, pp. 84–89, in a review of the book by Gunnar D. Hansson, *Lomonosovryggen*), these cruises have been tasked with collecting data on sea-bottom topography and seismic information to be used in Denmark's submission of its case regarding a claim to extend Greenland's continental shelf up to and around the North Pole, in accordance with the UN Law of the Seas. This claim is bound to overlap with a similar claim made by Russia with an eye to extending its continental shelf along the self-same Ridge in the opposite direction, from the Siberian coast to the North Pole and beyond, thus laying the foundation for a possible conflict. However, the UN commission responsible for processing all such continental shelf extension claims in various parts of the world has its hands full and will probably not be able to assess the Danish, Russian or Canadian claims until the year 2025. This is a time horizon that also tallies quite well with the real situation regarding the development of new polar oil drilling platforms and transport technologies and the degree of melting of the polar ice needed before large-scale oil and gas exploitation from the deep Arctic sea-bed is able to meet the stricter requirements of environmental protection. Breum's book gives the most detailed popular portrayal of the LOMROG operation—its context and purpose—that I have found.

Another major section of the book (Part III) is entitled "Greenland—an Arctic oil state." Here one is given further details regarding the visions of the future entertained by Greenland's leading politicians and top civil servants or planners. There is also a sampling of critical voices; environmental activists and others who warn of catastrophic risks (the spread of oil from a spill or oil well trapped in sea ice) and/or the lack of transparency regarding decision-making and deals made behind closed doors in close association with foreign powers and multinationals.

A future scenario debated in Greenland is the possible influx of thousands of migrant, low-wage Chinese workers in the employ of land-based mining operations that would have considerable impact on coastal communities. One virtue of the book is a separate chapter that contextualizes such eventualities by tracing China's role as an investor in prospective mining ventures on Greenland as part of China's general policy of becoming a recognized player in the Arctic. Other aspects of China's strategy include an interest in commercial transport through the North-East Passage (Russia's Northern Sea Route), the forging of political and economic relations with Iceland (a free trade agreement signed and the building of Reykjavik's largest embassy), and gaining a toehold in the Arctic Council (observer status granted in 2013).

Let me add that currently, under Canada's chairmanship, the Arctic Council has taken steps to create a Circumpolar Business Forum that will have its inaugural "Arctic Economic Council" meeting in September this year. This will probably open the way for a more direct play of corporation interests in the life of the AC as the inter-governmental body.

In a brief review it is not possible to cover all the topical questions Martin Breum raises and addresses in his book. I recommend you to read it yourself.

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The Fast-Changing Arctic. Rethinking Arctic Security for a Warmer World is an anthology with sixteen chapters involving seventeen authors who are international scholars and military professionals that have written on the strategic consequences of the thawing of the Arctic. About half the writers are based in the USA and another three in Canada while the remainder are affiliated with Danish, Finnish, Norwegian, Chinese and UK institutions. Not surprisingly a North American perspective dominates the depiction of efforts made by governments and defense, security, and coast guard organizations. Some of the authors are well known authorities on policy pertaining to the Arctic whose overviews of long-term trends make up the mainstays of the book. There is a contribution from former US Coast Guard Captain Lawson W. Brighham, a veteran scholar who has researched the Soviet/Russian maritime Arctic, Arctic climate change, marine transportation, sea ice remote sensing, Arctic environmental protection, and polar geopolitics and is currently at the University of Alaska at Fairbanks. Ron Huebert, another of the contributors, is a political scientist at the University of Calgary affiliated to its *Centre for Military and Strategic Studies* and a scholar devoted to

international relations, strategic studies, the Law of the Sea, maritime affairs, Canadian foreign and defense policy, and circumpolar relations. Katarzyna Zysk is a specialist on Russia at the Norwegian Institute of Defense Studies, Oslo. The book's editor Barry Scott Zellen and some of his colleagues seem to have had in mind as the main audience primarily political decision-makers, and secondly university students following higher degree courses. The book's principal focus is on geopolitics and security.

What is novel is the anthology's discussion of the question of Arctic security, how this issue has become increasingly important in the context of all the rapid changes that are taking place (climate, quests for new sources of energy, shipping, environmental impacts etc.) and how pressures to deal with this dimension manifest both differences and commonalities in strategy, mainly amongst the Arctic rim states. In this respect, despite much repetition, the volume makes a valuable contribution that is also reflected in one of the main recommendations, which is that environmental security must now be regularly and systematically incorporated into the security thinking of the main actors. Hitherto this has tended to dwell mostly on issues of sovereignty, military and constabulary security. Environmental security is held up as a central factor in the equation facing the governments whose policy documents the various authors describe, mostly from the perspectives of political science and military studies, as shown in the following quotation:

> how to balance opportunities for the exploitation of resources with care for the environment and the rights of Arctic residents, while ensuring the region is free from conflict and that the Arctic nations, not outsiders, remain the key players in deciding what happens there (p. 18).

Another theme that runs through many of the chapters is that even though localized conflicts over resources and disputed boundaries may emerge, the prospects of cooperation between the core nations involved are fairly good. However as James Manicon, in one of the few more analytical chapters points out, national identity politics and myths (e.g., the sense of "Northernness") that were often integral to nation-building projects may still lead to popular pressure in any given nation pushing political leaders to adopt confrontational policies regarding conflict resolution. But, then again, a lot of rhetoric and posturing that goes on, for example in both Russia and Canada, to satisfy domestic audiences. P. Whitney Lackenbauer (Ch. 12) makes a good point when he portrays the posturing of "the bear" and "the beaver" as mirror images of each oth-

er's behavior in Putinland and Harperland, respectively. Also, as pointed out in another chapter a stronger multilateral mode for decision-making among political elites can lead to inclusion/exclusion mechanisms that tend to disempower rather than empower indigenous peoples in the countries concerned.

Here and there we are reminded of some startling realities, such as the enormous length of Russia's Arctic coastline and that Russia has by far the largest expanse of comparatively low-depth, easily accessible seabed resources. Also we learn that in a Korean shipyard a new commercial icebreaking oil tanker can be built in three months while in the USA it takes ten to fifteen years to finance an icebreaker and then design and build it.

Many elementary facts and figures regarding Arctic sea-bed resources, increasing maritime traffic and other activities in the Arctic as well as the contents of the policy documents of various nations appear in several chapters, which makes for much overlap and repetition. Many of the chapters are also reprints or revamps of articles previously published in periodicals, foreign policy and international law journals or national reports dating from 2009 to 2011, including the US Naval Institute's magazine *Proceedings*, and the US Naval Postgraduate School's *Strategic Insights*. In some instances the rapid change in the Arctic itself has already caught up with and overtaken the descriptions of conditions reported and thus rendered these obsolete, for example, concerning Arctic Council activities and its lack of a permanent secretariat, or oil and gas exploration projects started some years ago but since terminated because of unfavorable market conditions (e.g., the vast Russian Shtokman offshore gas field development project).

No reference is made anywhere in the book to the scientific cooperation and coordination taking place under the auspices of the International Arctic Science Committee (IASC) nor to the emerging field of Arctic social science, encouraged by the International Social Sciences Association (IASSA) responsible for the international congresses held periodically in this field. The most recent one was the VIIIth (hosted by the University of Northern British Columbia in Prince George, B.C., Canada) where one of the highlights was the participation of many First Nation, Inuit, Sami, and Nenets scholars from Alaska, Canada, Greenland, Nordic countries and Russia, respectively. The impact of neo-liberalism on regional policies in the circumpolar world and their intersection with issues of climate change, resource exploration, self-governance, health and welfare together with new security agendas is a frequent theme in forums like this but we do not see any reflection of such analysis in the volume under review here.

At the time when he assembled the various articles into an anthology, its editor Barry Scott Zellen was affiliated with the Anchorage (Alaska)-based Institute of the North where he was a Senior Fellow and director of the *Fast-Changing Arctic* project. He is an expert on international relations with many books behind him on statecraft, war and security strategies, but also on Inuit communities of the North. The present volume appears to be the result of an all too rapid attempt to round off the project before moving forward to another location and another big question. The subject of his new book is the quest to restore American security after 9/11.

The topic of "environmental security" is certainly timely but the volume fails to deal with it in the systematic manner it deserves and unfortunately does not anchor the discussion or engage with the recent literature on this topic that does actually exist. Regarding regional perspectives, the treatment of changes on and around Svalbard and Norwegian politics in the High North or Norwegian relations with Russia are largely missing from the book. Another weakness is that the volume simply ignores NATO military exercises in northern spaces adjacent to Russia and the protests of indigenous Sami communities against such exercises—more recently such protests have also been directed against the testing of drone technologies in the airspace near Kiruna in Sweden.

Haste may also explain why the present volume lacks an introductory chapter in which an editor would normally outline the rationale and interconnection of the various chapters, many of which could have been shortened without any loss to the whole. Chapters have been lumped together around three would-be thematic sections: "Arctic climate change. Strategic challenges and opportunities," "Cooperation and conflict. Paths forward" and "Regional perspectives." To this have been attached "Concluding observations" and an "Afterword;" but this fails to dispel the compendium-like impression of the book. Some time should also have been spent on closer proof reading to eradicate variations in spelling and the duplication of lines. The book unfortunately also contains a number of factual errors.

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In contrast, *Media and the Politics of Arctic Climate Change* is an anthology that stands out as an exemplary volume with an informative introduction and attention given to bringing together the different chapters into a whole. Here critical historical analysis is combined with a realist social constructivist perspective to demonstrate its ability to grasp deeper trends and puncture some commonly accepted myths about Arctic development.

This handy little volume has been produced by a group of humanities and social science scholars affiliated to the Division of History of Science, Technology and Environment in Stockholm at the Royal Institute of Technology's (KTH's) Environmental Humanities Laboratory, which is an integrative post-disciplinary division for research, education and societal engagement. The book presents some results from two projects led by Sverker Sörlin, professor of environmental history. One of the projects, entitled "Models, Media and Arctic Climate Change," was funded by the Swedish Research Council for the Environment, Agricultural Sciences and Spatial Planning (FORMAS) and ran from 2009–2011. It studied the influence of climate modelling on policy making for sustainable development, with particular reference to the Arctic. A central task was to contribute to a better understanding of the full social "chain of production" of modelling, from the primary production of data in the field, to the production of models and then to their dissemination and reception by the media and their influence on policy.

The other project, started in 2011 and finalized in 2013—entitled "Assessing Arctic Futures. Voices, Resources and Governance"—was one of five projects funded by the Swedish Foundation for Strategic Environmental Research (MISTRA) under the auspices of that funding body's interdisciplinary research programme *Arctic Futures in a Global Context*. This program as a whole was an initiative taken to build a multidisciplinary competence base in the social sciences and humanities regarding changes in the Arctic; an effort that has enjoyed some success.

In *Mistra's Annual Report* for 2011 a couple of the contributors to the volume reviewed here outline the rationale of some of their work as follows. It is to help deconstruct the most prominent narrative in current visions of the Arctic—that a decrease in sea-ice driven by climate change or "Arctic amplification" will lead to an increase in shipping and exploitation of natural resources in the region, a conclusion that is also challenged in the anthology. Findings from the *Arctic Futures* project make clear that there have in fact been several quests for energy resources in the Arctic in the twentieth century and none were predicated on a discourse of global warming and melting sea ice. On the contrary, when there actually was a considerable warming of the Arctic from 1920–1940, it was not rhetorically twisted to legitimise an intensification of resource exploration and exploitation.

In the edited volume *Media and the Politics of Arctic Climate Change* strands of both the Formas and the Mistra projects are brought together. History, media studies and science and technology studies are the most prominent disciplines to appear in this book, which contains six chap-

ters sandwiched between a substantial introduction and a concluding chapter, both written jointly by the three editors. Apart from summarizing and broadening the material presented, the concluding chapter also raises some more general issues about the role of social theory. It is noted that while many authors have devoted "a large amount of intellectual space to cultural consequences and virtual flows, exploration of the material and environmental consequences of global capitalism and consumerism have remained limited" (p. 166).

The immediate point of departure, and an issue taken up in several of the chapters, is the Arctic sea-ice minimum that was recorded in the late summer of 2007. It is depicted as an "event," constructed as such through satellite imaging and a complex synthesis of data sets into visual displays, picked up by the media and reconstituted as a significant moment in climate change, interpreted as a "meta-event." The latter part of this process is called mediatisation. This and the other concepts taken from media studies are explained in the introductory chapter.

In Chapter 2 media researcher Miyase Christensen presents the results from her study of how the story of climate change/Arctic/sea-ice was being told in the media firstly before 2007 and then afterwards. She shows how new dimensions came into a story that now incorporated further questions in the dominant narrative that linked three aspects on a rising spatial scale: sea-ice minimum, Arctic, and climate change. Christensen points to a two-pronged process in this construction—on the one hand a convergence of phenomena at local (sea ice and Arctic) and global (planetary) levels. This is referred to as "scalar transcendence." On the other hand and in parallel we see "topical multiplicity," that is, a multiplication of topics (e.g., polar bears, oil and gas, Arctic transport routes, climate warming, etc.) that newspapers and other media presentations link to the sea-ice minimum. The study also confirms how press coverage of climate change is episodic in character. New bursts of reporting tend to intermittently coagulate around specific events (an earlier example of this was Hurricane Katarina in New Orleans), separated by periods of attention fatigue.

Key is the matter of "framing" whereby journalists and reporters float a central organizing idea or story line that adds broader meaning(s) to an "event" by highlighting specific aspects while leaving out others. The author's media analysis indicates the growing significance of cultural, societal and political frames in the period 2007–2010 compared to 2003–2006. In the earlier period the media tended to fix on uncertainty and controversy, thereby giving disproportionate voice to a small contingent of climate sceptics whose denial of human-generated

climate warming was treated on par with the overwhelming majority of the climatological community's science-based cautious (and cautionary) statements regarding a human-induced climate change. In the post-2007 period a shift appears to a new situation where consensus and scientific certainty were also accented in the media. This helped draw public attention in some cases to both the need for and the lack of political action and mitigation.

Towards the end of the chapter there is an informative table that summarizes the different framings that can steer a storyline, ranging from the political economic over the scientific and the sociocultural, to the ecological, each with its own distinctive sub-frames and array of topics.

In Chapter 3 Nina Wombs looks at how data sets from remote sensing technology are transformed. She explains how satellite data on annual changes in Arctic sea-ice coverage is technically obtained and then processed through a complex translation and synthesis to yield striking visual images that are picked up by the media. We learn that at this "front end" of the chain shaping scientific data and imagery, the process is already imbued with meanings and messages that involve culturally contingent and historically situated standpoints and values.

In some cases the scientific text associated with a synthetic depiction of change, where numbers are replaced by a type of "photo illustration," provides information on the technique behind it. In other cases, however, this is excluded and we get a virtual "eye-in-the sky" witnessing of sea-ice reduction as though it was a photograph and we are invited into its place in space to "see" for ourselves. This adds to the power of the image and impresses more strongly on the viewer the importance of the story of the shrinking sea-ice as a part of the future of the fragile planet of Earth. As the old saying goes, a picture is worth a thousand words.

The chapter lets us understand that the shrinking sea-ice as instantiated or "depicted" by satellite "pictures" is actually a process stretched out in time and involves the work of many people and a variety of technological aids or actants (to use a term from Science & Technology studies, STS, the author might also have employed). The credibility of the process of synthesis and visualisation ultimately stands or falls on the transparency, integrity and proficiency of the human actors who shape the story of the Arctic as a centre and bellwether of melting, climate change and warming.

Sverker Sörlin and Julia Lajus' chapter (Ch. 4) addresses the question of an "ice free Arctic sea" from the vantage point of the history of polar exploration and science. They present historical evidence to show that

the trope of an ice-free Arctic is not a new one but actually has roots that go back a long way, even as far as Renaissance sources. In the twentieth century intimations cropped up, fed by empirical evidence in the 1930s, that the glaciers in the northern hemisphere were retreating. This was investigated by the Swedish glaciologist Hans W:son Ahlmann and in the the work of some leading Soviet Russian oceanographers.

In the context of nation-building in the Soviet Union such findings roused speculations about possible ice-free Arctic futures that would facilitate trans-Arctic trade and shipping. Sörlin and Lajus suggest that it was no coincidence that some of the results of Roald Amundsen's expedition on the *Maud*, which was frozen into the sea ice near the coast in Eastern Siberia for three winters (1923–1925), caught the attention of Soviet scientists (for the *Maud* expedition see my own article on Amundsen in *Journal of Northern Studies* 2012, 6:1, pp. 53–109). They point out that Finn Malmgren's doctoral thesis from Uppsala, O*n the Properties of Sea-Ice*, which appeared in 1927 based on research conducted during this expedition, was translated into Russian in 1930. Similarly several books by Sven Ulrik Sverdrup from this same expedition and a description of Sverdrup's *Nautilus* submarine expedition in the Arctic with George Hubert Wilkins (1931) were also quickly translated into Russian (in 1930 and 1931 respectively). These are important facets of a forgotten history that is presented in this chapter, which also documents the interests and work of Soviet scientists and their intermittent contact, and in some cases coordinated efforts, with researchers in the West, especially Scandinavia.

The authors go on to review how after 1945 the Cold War spurred environmental science in the USA where Ahlmann's new knowledge of "Polar Warming" led to his expertise being solicited by that country's dynamic Joint Research and Development Board, the body that advised Pentagon and the US Joint Chiefs of Staff on what we nowadays call research foresight and agenda setting. Ahlmann's anticipatory intelligence served as significant input in promoting US research in the Arctic to meet the challenge of Soviet superiority in this domain.

It seems that in some scientific circles in the 1950s, on both sides of the Iron Curtain divide between East and West, there were predictions that there might be an open Arctic Sea by the year 2000, but this scenario later fell into oblivion. The same scenario has recently been resurrected with some speculations setting the prospect of an open sea somewhere in the 2030s. The point made is that the trope of an ice-free Arctic Sea is not entirely new; what is new, however, is the character of the research programs, which are now more multinational and con-

tinuous rather than national, periodic and expedition based. Otherwise, and here is the other point, the science politics of sea-ice when analysed from a longer term historical perspective confirms the realist-constructivist view that interests drive science. "Although ambitions to build knowledge existed in several countries, it was economic, strategic, military and geopolitical factors that determined who conducted the most systematic efforts" (p. 83). Finally, depending on where and who one asked, the attribution of value varied. From a Western perspective, sea-ice was often regarded as a "risk and obstacle to economic values of the Arctic;" in contrast, amongst indigenous polar populations it was viewed as a boon, signifying a "hunting ground, livelihood, medium of travel, play and wayfaring" (p. 73).

Chapter 5 is written by Annika E. Nilsson, a Senior Fellow at the Stockholm Environment Institute (SEI) and Ralf Döscher, a senior researcher at the climate-modelling unit, the Rossby Centre of the Swedish Meteorological and Hydrological Institute (SMHI). Their account also starts with the moment when the Arctic Ocean ice cover reached a record low in 2007 and how this was interpreted as a sign that we are entering the Anthropocene era, that is, one where human actions are a major driver of Earth as a system. They focus on an important distinction that tends to get obscured in media reports, namely that between *variability* of climate in the Arctic and *change* of climate in the Arctic. This may be because of a shift in emphasis in the media, from the portrayal of scientific discourse on climate as essentially controversial and contested, towards the current media line clearly recognising a human dimension and therefore anthropogenically generated climate change.

The major part of the chapter consists of a review of the scientific framing of the question of change in the Arctic climate in six key assessment texts over the years 2001 to 2011. These reflect the scientific consensus at different points in time. They are texts produced by a number of international bodies including the IPCC, the Arctic Council and the International Arctic Science Committee (IASC). Nilsson and Döscher highlight how "variability" and "change" are treated in these texts within the frame of an international politics of attribution. A further distinction introduced is one between detection and attribution. Detection is about knowing whether or not the climate has changed and attribution is about why it has changed, for example how much weight is given to human causes.

The authors show how the discussion before 2007 was very closely linked to results of model studies framed in terms of natural climate variability but after that year, as the political framing of the story became

more prominent, the variability discussion faded in the public eye and in some policy documents, overshadowed by the question of "change" beyond the limits of the "natural." In the scientific literature where the importance of human driving forces is now taken for granted and uncertainty-talk is in part replaced by certainty-talk, climate variability still very much remains a key issue. The scientific community working with Arctic climate change has, in the face of strong political relevance pressures, been able to maintain a level-headed emphasis on "variability."

In other words there are in fact two parallel discourses, one closely linked to policy advice and another with its home in the scientific community and with few, if any, immediate implications for climate policy. Nilsson and Döscher argue that this is a positive sign and it is very important because, now that the controversy surrounding global climate change has been laid to rest, it is time to boost the need for a fine-grained analysis of weather extremes and surprises, knowledge that is linked to variability and as such is essential in the need to prepare here and now for adaptation to future climate scenarios. "Maybe the time is right," they conclude, "to highlight the importance of climate variability also in the media and other popular science account" (p. 110).

In Chapter 6 Henry P. Huntington takes up the reactions (or lack of them) of local Inuit people in Canada and Alaska to the retreat of sea-ice in the summer of 2007. In their communities the big sea-ice stories were largely regarded as stories about people outside the Arctic who were concerned with other things far away. For the Inuit communities there was no particularly dramatic local story to tell; life continued as usual and the later freeze-up was seen as revealing the need to develop new hunting patterns and other modes of adaptation to new conditions, some of which were advantageous other a problem.

Locally in some areas like Baffin Bay and the coastal waters of the Bering Sea there was nothing unusual, since the non-existence of summer sea-ice was a normal condition. In other places where the sea-ice serves as a surface for travel and hunting and a habitat for animals, the most significant changes during the past couple of decades have concerned the timing and pattern of its formation as well as its quality. None of this was sufficiently eye-catching to be picked up by the world's major media. Apart from houses becoming distorted by the effect of permafrost melts, there was usually no special local angle to the retreating ice story because local changes on the Arctic coast were out of step with the larger-scale dramatic media event of 2007. Huntington discusses why this was so, but also why local perspectives and indigenous knowledge is important and needs to be considered much more than it has been in

major international assessments of Arctic change. All the more so because the long-term impacts of Arctic climate change impinge strongly on the livelihood and future of indigenous peoples.

In Chapter 7 the anthology moves back to the historical perspective as Dag Avango and Per Högselius show how the quest for Arctic energy resources is far from new. They argue that the current quest for Arctic oil and gas would have come about even in the absence of climate change. This implies that today's intensifying interest in the Arctic as a promising energy region is not simply an effect of the climate debate. What is happening is that the changing sea-ice has only made the discussion of prospective Arctic energy resources more dynamic. Their article, entitled "Under the Ice. Exploring the Arctic's Energy Resources, 1898–1985," thus provides an important corrective to a commonly held misperception that confuses cause and effect. The argument is backed up by two substantive sections, the first of which provides a detailed examination of the interests behind and the character of mining operations and their problems and challenges, including environmental and working conditions on Spitsbergen in the era of coal in the opening decades of the twentieth century. The role of scientists is also touched upon. It is a fascinating account based on Avango's thorough knowledge of the subject (for other writers on the same topic who might have been cited however, see: http://digitalcommons.mtu.edu/cgi/viewcontent.cgi?article=1307&context=etds; and http://services.lib.mtu.edu/etd/DISS/2009/SocialSci/hartnell/diss.pdf).

The second section makes a similar sweep over the post-Second World War era when exploitation of oil and gas resources off the shores of Alaska and Canada and in the Soviet Arctic gained momentum. Now the stakes and the challenges were even more daunting and we learn how this spawned many innovative ideas and remarkable new and emerging technologies, as well as some infrastructural systems for accessing oil and gas in the field and bringing them to the market in places far away from the sources. Here the chapter builds on Högelius' research and perceptive overview of the various companies, oil and gas fields and other actors, or actants, involved. A couple of illustrations of massive, towering drill rigs and platforms designed to withstand the assault of icebergs and moving ice-packs provide telling visual images that convey the spirit of great optimism on the part of engineers and the companies. They are convinced that ice can and must be conquered and tamed or "managed;" thus they perpetuate the same kind of attitude that was already there amongst engineers and entrepreneurs in the era of Svalbard coal mining.

These two sections in this penultimate chapter are preceded by a

brief introductory historical overview of the development of Arctic energy resources for the whole period considered and the economic and political motives behind the different phases as they appeared in Svalbard, Alaska, Greenland Canada and the USSR/Russia. This ties into one of the overarching points of the book, the fact that the sea-ice has not always and by everyone been regarded as a problem—it has also been viewed as a facilitator. The positive values attributed to Arctic and northern spaces, past, present and future, are many. For Svalbard coal miners in wintertime the solidly frozen ice attached to the shore already sometimes served as a direct material aid, a loading platform for ships, and ice more generally featured as a "grand challenge"—as it still does today—in rhetorical strategies to encourage investors to back risky projects that promise fantastic profits.

The title of one of the projects behind this volume was "Assessing Arctic Futures." Future is written in the plural. The insight is that we are not dealing with a single deterministic future driven by current processes of privatized globalisation or mediatisation. The future is both a commodity and a political concept that different actors have fought and continue to fight over. The book evidences this thesis in its important probing of tensions and competition between various stakeholders at different times to gain hegemony over the discourse of the future.

A second insight, as already indicated above, concerns the multiple role of science as politics. This becomes evident, for example, in the politics of attributing causes to Arctic climate change, a process that in turn is institutionally embedded in multi-layered regimes of governance, propelling and shaping scientific activity. The interface between science and policy is not a one-way street where science speaks to power but one where socio-political and scientific orders intermesh and are continually co-produced. As the project leaders wrote in the *Mistra Annual Report 2011*, even the most convincingly argued scientific findings can only gain political authority through political processes.

Although this is played out in different ways in different periods, for example, the early twentieth century, the Cold War, and Arctic regionalization 1990–2000, and the present re-territorialization, the common denominator, they maintain, is one where for the most part science does not come before politics, but politics comes before science. As they put it in the *Mistra Annual Report 2011*, science and politics work together in the construction of futures designed to serve as carriers of national and other interests. From budgetary processes in state capitals below the Arctic Circle all the way into high latitude field sites, science is stamped by social, political, and economic priorities—concerns for hydrocarbon

and mineral abundance, the health of fisheries and ecosystems, the thickness and extent of sea-ice, and many others.

The third key insight highlighted in that same report concerns the status of climate change as a political resource. This too, as already noted, is amply substantiated in the volume *Media and the Politics of Arctic Climate Change*. Overall the book represents some of the best that scholarship in the humanities and social sciences has to offer in answer to a burning question of our time, the era of the Anthropocene. It shows how the values attributed to the Arctic are varied and contested, how they are constructed and what role the media play in amplifying, ignoring or distorting them.

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Christine Ekholst, *A Punishment for Each Criminal. Gender and Crime in Swedish Medieval Law* (The Northern World 67), Leiden & Boston: Brill 2014, ISBN 9789004271449 (hardback); ISBN 9789004271623 (e-book), VIII + 238 S.

Das Buch ist eine geschichtliche Dissertation, die unter dem Titel *För varje brottsling ett straff. Föreställningar om kön i de svenska medeltidslagarna* im Jahre 2009 an der Stockholmer Universität veröffentlicht worden ist.[1] Es handelt sich jedoch nicht um eine wörtliche Übersetzung des schwedischen Textes, sondern um eine Neubearbeitung, die zu erheblichen Kürzungen geführt hat: Wies die Dissertation noch 307 Seiten auf, so ist die Übersetzung auf nur noch 238 Seiten geschrumpft. Um dies zu erreichen, hat Frau Ekholst ihren Text neu formuliert, gekürzt und die wörtlichen Quellenzitate nur noch in englischer Übersetzung gebracht, die in der Dissertation gebotenen altschwedischen Texte dagegen gestrichen. Auch das Inhaltsverzeichnis enthält nur noch die sieben Kapitelüberschriften, die Zwischentitel fehlen in der Übersicht. Diese Rosskur hat das Buch nicht verbessert.

Frau Ekholst beginnt mit einer Durchsicht der schwedischen Landschaftsrechte, die sie – wie üblich – in *göta* und *svea laghar* gliedert, herangezogen hat sie auch Magnus Erikssons *landslagh* (MELL), dessen *stadslagh* (MEStL) und Christophs von Bayern *landslagh* (KrLL), so dass sich die rechtliche Entwicklung bis 1442 ablesen lässt. Der Abschnitt „The Peasant" stellt die Bauern als gleichberechtigte Teilnehmer des Things und Urheber der Gesetze dar, während der *laghman* lediglich als Richter beschrieben ist, worauf ihn nur die jüngsten Gesetze beschränkten, während er früher als „Gesetzessprecher" auch gesetzgeberisch tätig war. Die Eidschwurgesetzgebung will Frau Ekholst nur dem König zurechnen, obwohl gerade darin Kirche und König im Sinne der Friedensstiftung zusammenwirkten. Die Frau wird dargestellt als dem Manne untergeordnet und weder auf dem Thing repräsentiert noch zu Rechtsgeschäften berechtigt. Dass sie erst im 13. Jahrhundert erbberechtigt wurde, scheint mir zweifelhaft.

Das zweite Kapitel beschäftigt sich mit den Eigentumsdelikten Diebstahl, Raub, Gebrauchsdiebstahl und Vandalismus. Schweden war eine offene Gesellschaft: Alles Wichtige musste öffentlich geschehen oder kundgetan werden. Geschah das nicht, setzte man sich leicht dem Diebstahlsverdacht aus. Frau Ekholst behandelt zunächst die männlichen Täter; Frauen tauchen als Diebe in den Landschaftsrechten nur auf, wenn sie fremde Kühe melkten. Der Raub wurde in den Landschaftsrechten und in MELL – je nach dem Wert der Sache – noch verhältnis-

mäßig gering bestraft. Das änderte sich erst in KrLL (1442), wo dem Delikt bei handhafter Tat die Todesstrafe folgte. Raub begingen aber auch Adelige, wie sich aus der Alsnö-Verordnung von 1279 ergibt,[2] welche die Gewaltgastung (*våldgästning*) verbot. Hier hat Frau Ekholst nicht nur das Jahr der Verordnung fälschlich mit 1280 angegeben, sondern auf S. 55 in Fn. 88 nicht nach dem Original, sondern nach Holmbäck-Wessén zitiert. Der Raub galt als männliche Tat; eine Frau wird nirgendwo als Räuberin genannt. Diebstahl war im schwedischen Mittelalter ein schandbares Delikt, dessen Strafen sich nach dem Wert des Gestohlenen richteten, bei geringem Wert mit Buße und Körperstrafen belegt und bei Tätern, die auf frischer Tat ertappt wurden, mit der Todesstrafe geahndet wurde. Wurde es lediglich mit einer Buße geahndet, so war der Täter, wenn man ihn „Dieb" nannte, damit erneut bestraft, da er nicht länger als vertrauenswürdig galt.[3] Auch Frauen haben gestohlen. Sie galten bereits als Dieb, wenn eine fremde Sache in ihrem Gewahrsam gefunden wurde. Allgemein hielt man Frauen im Mittelalter für hinterlistig, verlogen und bemüht, ihre Taten zu verbergen.[4] Weil sie aber nicht voll geschäftsfähig waren, konnten sie nach götischem Recht weder gerädert noch gehängt werden, vielmehr sollte ihr Ehemann die über sie verhängte Buße für sie zahlen. Weigerte er sich aber, so wurde sie geprügelt und ihre Ohren abgeschnitten. Dagegen unterwarf Magnus Erikssons *stadslagh* (MEStL) die Diebinnen derselben Strafe wie männliche Diebe.

Das dritte und vierte Kapitel behandeln die im Mittelalter überaus häufige Gewalt, die sowohl ein geringer Angriff als auch tödlich sein konnte und verschiedenartige Wunden hervorrief, die von der Vollwunde (*fullsæri*) bis zur harmlosen *skena* [‚Platzwunde'] oder *bloþuiti* [‚blutigen Schramme'] bzw. bis zum schwarzen Schlag (*svarta slagh*, dem blauen Fleck) reichten. Sie wurden im Mittelalter genau untersucht und bei der Bußhöhe entsprechend gewertet. Kirche und Obrigkeit suchten diese Gewalttaten zurückzudrängen, weil sie dem Einzelnen Mannheiligkeit (*manhælghþ*) zubilligten, Unverletzlichkeit des Körpers und Befriedung seines Eigentums. Eine ursprünglich religiöse Bedeutung lässt sich für die *manhælghþ* zwar nicht erkennen, doch hat das Christentum den Begriff neu gedeutet.[5] Dass es „an obscure and unspecific legal concept in the provincial laws" sei, kaufe ich Frau Ekholst (S. 96) nicht ab.

An mehreren Stellen der Arbeit kommt auch die Talion vor. Das auf S. 98 stehende Beispiel: „having your hands cut off for castration" ist jedoch keine Talion; auch lässt sich kaum bestreiten, dass der Talionsgedanke christlichen Ursprungs ist und die Kirche ihn in Schweden eingeführt hat, um die Rache, insbesondere die *vindicta transversa*, zu begrenzen.[6] Frau Ekholst scheint auch den *vaþa*-Begriff zu eng (nur

als Zufall) zu nehmen, tatsächlich umfasst er auch die Fahrlässigkeit.[7] Gut herausgearbeitet hat sie die Fälle, wo ein Mann eine Frau verletzte. MEStL bestrafte die Verletzung ihres Busens wie eine Entmannung mit doppelter Buße oder 40 Mark.[8] Tödliche Gewalt, verursacht von einer Frau, bestraften die Götarechte nur mit einer Buße, die ihr Muntwalt zahlen sollte; die Svearechte belegten sie mit einfachem Wergeld, schlossen aber jede Rache aus. Erst die Reichsgesetze legten für Tötungen den Satz fest, dass eine Frau wie ein Mann mit dem Tode bestraft werden solle, doch ist zweifelhaft, ob die Praxis der Gerichte dem folgte. Bei Totschlägen in der Familie macht sich kirchlicher Einfluss bemerkbar: Der Täter musste nach Rom pilgern, um Ablass nachzusuchen.[9] Verschärft wurden die Strafen beim Kindsmord: War das Kind ungetauft, verhängte *Östgötalagen* eine Buße von 40 Mark, war es getauft, folgte Todesstrafe: Der Mann wurde gerädert, die Frau gesteinigt, so auch in MELL und in MEStL, wo jedoch die Frau verbrannt wurde. Seine Tat machte den Täter erbunwürdig.

Typische Frauendelikte waren Hexerei und Vergiftung, sie sind die einzigen Taten, für welche die Frau voll verantwortlich war und galten als schwere Verbrechen: Nach dem älteren *Västgötalag* wurde die Frau nicht nur friedlos gelegt, sondern sollte anschließend (bußlos) getötet werden. Die jüngeren Reichsrechte stellten Männer und Frauen als Täter gleich. So bestrafte MELL Vergiftung bei Frauen und Männern mit dem Tode, wobei Männer gerädert, Frauen gesteinigt wurden, was bereits die Skara-Verordnung von 1335 vorgesehen hat.[10]

Das 5. Kapitel behandelt den wichtigen Bereich der Sexualdelikte Unzucht, Ehebruch und Sodomie. Hier ergibt sich, dass Unzucht nur für Männer strafbar war und mit Bußen geahndet wurde, die der klagenden Frau als Ersatz und Strafe für den Täter allein zustand. Wichtig war – wie Frau Ekholst S. 166 richtig sagt – dass der Sexualakt nicht als beiderseitig, sondern als einseitig männliches Tun angesehen wurde, während die Frau nur eine passive Rolle hatte, gleichsam als Objekt und männliches Eigentum behandelt wurde, so dass sie Bußen für die Tat weder zahlte noch erhielt. In MEStL waren die Bußen höher, weil die Taten sich häuften und man uneheliche Kinder verhindern wollte. Eine Frau zum Sex zu verführen, bestrafte *Helsingelagen ærfþa balk* mit Bußen, gleichgültig, ob die Frau deswegen ihren Ehemann, Sohn, Vater oder Bruder verließ. Frau Ekholst betont hier lediglich die Verwandtschaft und vermisst zu Unrecht im Kirchenrecht die Unterscheidung von Hurerei und Ehebruch.[11] Entstand aus dem Sex von Frau und Mann ein Kind, so sagen alle schwedischen Gesetze, dass nachfolgende Ehe dies Kind erbberechtigt machte. Sie haben also den Grundsatz der *legitima-*

tio per matrimonium subsequens des kirchlichen Rechts übernommen.[12] Trotz allen kirchlichen Einflusses auf das staatliche Recht, gab es eine Konkurrenz zwischen Kirche und Staat beiden bei der Verfolgung von Ehebruch: Nach *Östgötalagen*, Kkb 27 durfte der bischöfliche Offizial Ehebruch nur verfolgen, wenn der Ehemann selbst Klage erhoben hatte.

Das letzte Kapitel behandelt Raub und Entführung von Frauen. Frauenraub richtete sich gegen die Frau, nicht gegen ihre männlichen Verwandten. Versuchte jemand eine Frau zu rauben, hatte sie das Recht, aus Rache den Räuber zu töten. Ihre Tat war gerechtfertigt und wurde nicht verfolgt.[13] Auch hier ist kirchlicher Einfluss zu spüren, denn es handelt sich um die biblisch und kanonistisch anerkannte Notwehr.[14]

Was schließlich das Handwerkliche des vorliegenden Buches angeht, ist zu bemerken, dass die häufigen Binnenverweisungen ohne Seitenzahlen sind, so dass man sie nur schwer finden kann. Originalquellen sind nur sparsam zitiert, Aufsätze im Literaturverzeichnis leider immer ohne Seitenzahlen angegeben. Der *Tidelagsbrott* von Jan Eric Almqvist (Name fehlerhaft zitiert) ist nicht in der verbesserten Auflage von 1938 und die *Rättshistoria* von Göran Inger nicht in der verbesserten Auflage 5.1 von 2011 benutzt, da die zwischen der schwedischen und der englischen Auflage erschienene neue Literatur[15] (2009–2014) nicht nachgetragen ist. Auf das Konto des Verlags Brill geht die fehlende Fadenheftung, die das Buch anfällig für fliegende Seiten macht, doch hat er für säurefreies Papier und einen kurzen Index gesorgt, der in der schwedischen Ausgabe fehlt.

Positiv bleibt zu bemerken, dass das Buch insgesamt die schwedischen Gesetze zwischen 1220 und 1442 intensiv und erschöpfend auf die Bestrafung von Männern und Frauen durchforscht und auf dem Hintergrund der europäischen Geschichte ausgebreitet hat. Damit sind die Darstellungen von Holmbäck-Wessén und Ragnar Hemmer nicht nur erweitert, sondern glücklich ergänzt, und das Buch hat sich damit einen Platz in der schwedischen Rechtsgeschichte erworben.

NOTEN

[1] Das Buch hat die Stockholm University 2009 unter der ISBN 978-91-7155-811-4 gedruckt.

[2] DS I, Nr. 799, S. 650–654; so überzeugend: Jan Liedgren, *Alsnö stadgas språk och datering* [‚Sprache und Datierung der Verordnung von Alsnö'] (1985), S. 103–117. In Frau Ekholsts Buch fehlt bei Zitaten aus DS nicht nur die Bandzahl, auch die Verweisung auf die Elektronic Resources (S. 222) ist falsch: Die dortige Internet-Adresse (S. 222) führt nicht zu Riksarkivets huvudkartotek [‚Hauptkarthothek des Reichsarchivs'] (richtig: sok.riksarkivet.se/sdhk), sondern zu ihrem eigenen Buch. Die SDHK-Nr.

dieser Urkunde (=Svenskt Diplomatariums Huvudkartotek över Medeltidsbreven =[‚des Schwedischen Reichsarchivs Hauptkartothek der Mittelaltersurkunden'] für DS I, Nr. 799 ist 1122! Frau Ekholst hat sie jedoch niemals angegeben (z.B. S. 70, Fn. 134; S. 149, Fn. 187;) oft hat sie die Urkunden überhaupt nur mittelbar zitiert (z.B. S. 125, Fn. 72; S. 154, Fn. 14; S. 182, Fn. 122; S. 185, Fn. 144).

[3] Frau Ekholst zitiert Göran Ingers *Svensk rättshistoria* [‚Schwedische Rechtsgeschichte'] in der Auflage von 1997; sie ist jedoch überholt, denn aktuell ist die verbesserte Auflage 5.1 von 2011 mit neuer Seite 110, Fn. 375.

[4] Hier wird Heinrich Kramer und Johann Sprenger, *Malleus Maleficarum* zitiert, jedoch nicht das Original, sondern die englische Übertragung von Rev. Montague Sommers. Besser geeignet wäre die zweibändige Ausgabe von Christoph S. Mackay, Cambridge 2006, deren erster Band das lateinische Original, der zweite die englische Übersetzung bietet.

[5] Vgl. Klaus von See, *Altnordische Rechtswörter* (1964), S. 131 ff.

[6] Man kann deshalb kaum sagen, „it is wrong, to claim, that retaliation was alien to the Scandinavian societies" (S. 98; vgl. auch SS. 116 f. 126; 162), denn die Wurzeln der Talion liegen in der Bibel (Exod. 21: 22–25; Lev. 24: 20; Deut. 19: 21), ihre Regel ist im Zuge der Christianisierung in Schweden übernommen worden.

[7] Ekholst S. 100. Schon Collin und Schlyter *Västgötalagen*, S. 515 umschreiben *vaþa* sowohl mit *fortuitus* als auch mit *delictum involuntarium*.

[8] Ekholst S. 119: Für die Herkunft der 40-Markbuße hätte Gösta Åqvist, *Frieden und Eidschwur* (1968) benutzt werden sollen.

[9] Ekholst S. 125, doch zitiert sie in Fn. 72 nur Hemmer, nicht die Bulle Alexanders III: in DS I, Nr. 56, S. 83 ff. = SDHK-Nr. 206.

[10] Ekholst S. 149 zitiert sie als DS 3106, fügt aber nicht den Band (IV) hinzu und gibt auch nicht die SDHK-Nr. 4113.

[11] Ekholst S. 167; der Unterschied ist im Kirchenrecht durchaus deutlich, wie sich für den Ehebruch aus Belegen der Bibel (1. Kor. 6: 9) und des kanonischen Rechts Grat. C 32. 4. 4 (Ambrosius) bei Emil Friedberg, *Corpus iuris canonici* I (1879), Neudruck 1959, Sp. 1128; Grat. C. 32, 5. 16 (Augustinus) bei Friedberg I, Sp. 1137; Grat. C 32. 5. 23 (Innozenz I.), bei Friedberg I, Sp. 1138 und für Fornikation aus Grat. C. 22. 1. 17 (cap Theodulfi c. 26) bei Friedberg I, Sp. 866 und aus Grat. C. 22. 17. 1. 20 (Augustinus) bei Friedberg I, Sp. 1055 ergibt.

[12] Er ist zu finden als Dekretale Alexanders III. in X 17. 1 in: Emil Friedberg, *Corpus iuris canonici* II (1879), 2. Neudruck 1995, Sp. 709 f. und jetzt von der Bayerischen Staatsbibliothek im Internet: www.geschichte.digitale-sammlungen.de/decretum gratiani/online/angebot.

[13] Uplandslag Konungabalk [‚Königsabschnitt'] c. 6.

[14] Vgl. Exod. 22: 1; Grat. C 13. 2. 32 (Friedberg I, Sp. 731 f.); X 5. 12. 2 (Friedberg II, Sp. 793 f.); vgl. Stefan Kuttner, *Kanonistische Schuldlehre* (1935), S. 334 ff.; 347 f.; Lotte Kéry, *Gottesfurcht und irdische Strafe* (2006), S. 104 f.; 438 f.; Strauch, *Mittelalterliches Nordisches Recht bis 1500* (2011), S. 455 f.

[15] Z. B. Per-Axel Wiktorsson, *Äldre Västgötalagen och dess bilagor* [‚Das ältere Westgötenrecht und seine Beilagen'] I, II (2011); Göran B. Nilsson, *Nytt ljus över yngre Västgötalagen* [‚Neues Licht über das jüngere Westgötenrecht'], (2012).

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Jonas Harvard & Peter Stadius (eds.), *Communicating the North. Media Structures and Images in the Making of the Nordic Region*, Farnham: Ashgate 2013, ISBN 9781409449485, 364 S.

Der Aufsatzband ist das Ergebnis einer Netzwerkkooperation zwischen zwei Forschungsprojekten, die an den Universitäten Helsinki und Södertörn (Stockholm) angesiedelt sind. Es handelt sich um interdisziplinäre *area studies* Projekte, die medienanalytische und kulturhistorische Komponenten aufweisen, so dass es galt, in dem vorliegenden Buch eine recht große Bandbreite an Ansätzen zu harmonisieren. In ihrem Vorwort bezeichnen die Herausgeber selbst diese Integration als eine „creative challenge". Da sie sich offensichtlich darum bemüht haben, diese Herausforderung zu bewältigen, ist ein sehr gut redigierter, wenn auch nicht vollends zufriedenstellend integrierter Band entstanden.

Thematisch geht es darum zu erkunden, welche Rolle die Medien bei der Formierung und Tradierung der Idee des „Nordischen" hatten und haben. Dabei wird ein Zeitraum vom Anfang des 19. Jahrhunderts bis in die Gegenwart ins Auge gefasst. Unter dem Begriff des Nordischen werden prinzipiell die fünf Nationalstaaten Dänemark, Finnland, Norwegen, Schweden und Island subsumiert, wenngleich Island kaum einmal Erwähnung findet. Ein gewisses Übergewicht an auf Schweden zentrierten Untersuchungen kann dadurch plausibel gemacht werden, dass dieses Land oft stellvertretend für ein nordisches Modell gesehen wird, was unter anderem Carl Marklund in seinem Beitrag (Kap. 12) über das schwedische Image zur Zeit des kalten Krieges herausarbeitet. Im Übrigen können imagologische Studien per se nicht mit einem präzisen Gegenstandsbereich rechnen, sondern müssen mit Vorstellungen oder Stereotypen arbeiten, wie die beiden Herausgeber in ihrer umfassenden Einleitung deutlich machen (Kap. 1). Ihre Ausführungen zur Konzeption des Raums (*space*) finden dann im Buch kaum einen Nachhall, und auch der titelgebende Medienbegriff wird – abgesehen von Kap. 2 und 3 – nur in Ansätzen genutzt, um die Medialisierungs- oder Kommunikationsprozesse selbst zu hinterfragen.

Die übergeordnete Fragestellung „how a region is produced and mediated over time" (S. 17) wird in 12 vorwiegend empirisch ausgerichteten Einzelstudien beleuchtet. Alle schließen mit einer konzisen Zusammenfassung, die die Einzelergebnisse nicht nur resümieren, sondern auch in vorbildlicher Weise auf den Zusammenhang des Bandes hin konturieren. Die untersuchten Medien sind in den meisten Fällen Printprodukte, das heißt Zeitungen, Zeitschriften und Magazine, auch ein paar literarische Texte (Reiseberichte) werden herangezogen; Filme,

Fernsehen oder elektronische Medien kommen nicht vor. Bilder (Fotos) spielen keine nennenswerte Rolle, sie werden nur punktuell zur Illustration herangezogen, sind aber nicht Gegenstand der Analyse. Die beiden ersten Beiträge allerdings (die sicherlich dem Projekt über die Kommunikationsstrukturen des Nordens zuzuordnen sind) eröffnen den Band mit informativen Aufsätzen zum skandinavischen Mediensystem einerseits und zum Telegraphen als Instrument der Nachrichtenübermittlung andererseits. Lars Nord (Kap. 2) fragt nach der Entwicklung der skandinavischen Mediensysteme von 1850 bis 1950, wobei er Presse und Radio untersucht und zu dem Ergebnis kommt, dass die allgemein angenommene Spezifizität der nordischen Systeme einen Mythos darstellt. Die Printmedien sind stark von Deutschland beeinflusst, das Radio von der BBC, denen doch durchaus jeweils eigene Element hinzugefügt wurden. Auch die Annahme eines gemeinsamen „Nordic media market" lässt sich seinen Ergebnissen zufolge nicht verifizieren. Jonas Harvard (Kap. 3) verneint in seiner Studie der telegraphischen Nachrichtenübermittlung, die in den 1850er und 1860er Jahren eingerichtet wurde, ebenfalls die Bedeutung der gesamtnordischen Dimension. Das damals neue Medium diente eher einer globalen denn einer regionalen Vernetzung. Interessant ist jedoch die Beobachtung einer medial verursachten Vereinheitlichung der Nachrichten, die durch eine Gegenüberstellung dreier skandinavischer Zeitungen exemplarisch veranschaulicht wird (S. 60). Diese beiden Beiträge sind beispielhaft für das Vorhaben des Bandes, als sie sowohl das Konzept des Nordischen wie auch dessen mediale Entstehungsbedingungen hinterfragen.

Die übrigen Aufsätze sind, wie gesagt, in erster Linie Zeitungs- und Magazinanalysen gewidmet, stellen also exemplarische Fallstudien dar. Sie beleuchten das Mediensystem „von unten", auf der Basis vorliegender Einzeldokumente, interessieren sich aber nicht für die Übermittlung (*mediating*) oder das Kommunikationssystem als solches. Geographisch steht dabei, wie auch in den beiden schon erwähnten Aufsätzen, fast immer die Frage nach dem Skandinavischen oder Nordischen im Zentrum. Die Ansätze unterscheiden sich insofern, als sie dieses mediale Konstrukt entweder aus der Innen- oder aus der Außenperspektive beleuchten. So untersuchen zum Beispiel Kazimierz Musiał und Maja Chacińska (Kap. 13) das Bild des Nordischen in der polnischen Presse, und zwar in zwei Zeiträumen: der Zwischenkriegszeit und nach 1989. Nicolas Glover (Kap. 10) hingegen widmet sich der nordischen Selbstdarstellung im Kontext zweier Weltausstellungen, in Montreal 1967 und in Osaka 1970. Im letztgenannten Fall haben wir es mit einer ökonomisch und politisch motivierten, bewussten Inszenierung von „Nordizität" zu tun, während

im erstgenannten Fall das Konzept des Nordischen benutzt wird, um eigene politische Problemstellungen zu diskutieren: „Poland looked abroad for recovery and development" (S. 311), sucht Modernisierungsansätze und findet „realized utopias" (S. 312). In ihrem aktuelle Beispiele fokussierenden Nachwort (Kap. 14) machen die Herausgeber zwar auf diese Zweiteilung der Ansätze aufmerksam, leiten daraus aber keinen grundsätzlichen Unterschied der Methodik oder der Konzeption ab. Während der Rezeptionsansatz durch den eigenen, nicht-nordischen Problemhorizont determiniert ist, bestimmen schwedische (bzw. skandinavische) Interessen die kalkulierte Produktion von Identitätsdiskursen – sowohl die Konzeption des Nordischen als auch die kommunikative Struktur unterscheiden sich daher grundsätzlich. Ob und wie diese beiden Tendenzen sich zueinander verhalten, wird nicht thematisiert.

Die Innenperspektive kommt weiterhin in dem Beitrag von Jonas Harvard und Magdalena Hillström (Kap. 4) zum Tragen, der das pan-skandinavische Studententreffen von 1856 als „Media Event" beleuchtet. Auch der Aufsatz von Tora Byström (Kap. 5), die das von 1939 bis 1945 publizierte schwedische Magazin *Nordens Frihet* analysiert, hebt auf eine Innenperspektive ab, wenn es um die Schwierigkeit einer nordischen Solidarität angesichts der Rolle Finnlands im Zweiten Weltkrieg geht. Erlend Eidsvik (Kap. 6) zeigt, wie das in Südafrika publizierte Magazin *Fram* (1914–1954) durch die Evokation einer „common Scandinavian legacy" (S. 142) eine nordische Gemeinschaft fernab der geographischen Ursprungsregion herstellt.

Auf die Rezeptionsperspektive konzentrierte Beiträge setzen das Skandinavische in Relation zum schon erwähnten polnischen, zum britischen, spanischen oder zu einem europäischen Horizont. Andrew G. Newby (Kap. 7) schreibt über die identifikatorische Haltung der britischen Presse zur viktorianischen Zeit gegenüber dem Nordischen, das in einer rückwärtsgewandten Perspektive als „blutsverwandt" imaginiert wird. Elena Lindholm Narváez (Kap. 8) zeigt, wie das Bild der skandinavischen Frau in Spanien als Ikone der Emanzipation aufgenommen wird. Der Aufsatz von Peter Stadius (Kap. 11) beschäftigt sich mit Reiseberichten aus unterschiedlichen Ländern in den 1930er Jahren, die alle das Bild von den skandinavischen Ländern als „happy countries" vermitteln. Einen etwas anderen Ansatz wählt Linda Andersson Burnett (Kap. 8), wenn sie als Repräsentanten des Nordischen eine Gruppe von Sami in den Mittelpunkt stellt, die am Anfang des 19. Jahrhunderts in Großbritannien auf Ausstellungen präsentiert wurde. Als Medium wird hier sowohl die Ausstellungspraxis als auch deren Rezeption in der Presse verstanden, das Nordische erhält in der Repräsentation durch die Sami

das Image des „edlen Wilden". Eine Visualisierung dieser Ausstellung, ein Bild von Thomas Rowlandson, das nur kurz von Burnett angesprochen wird, bekommt insofern großes Gewicht, als es als Titelbild des Bandes gewählt wird. Nicht thematisiert wird allerdings, dass der zeitgenössisch sehr bekannte Künstler Karikaturist war, der seine Wirkungsmittel aus Überzeichnung und Verlachen gewinnt. Wenn er in dem Bild *Mr. Bullock's Exhibition of Laplanders* (1822) die Samenfamilie und die Rentiere inmitten der englischen Zuschauer zeigt, sorgen die grotesken Physiognomien der Engländer dafür, dass nicht die Sami, sondern die englischen Voyeure dem Verlachen preisgegeben werden. Das Bild fügt also der Konfrontation mit der Alterität eine Ambivalenz hinzu, die eine Medienanalyse berücksichtigen sollte.

Wie sich dieses Bild sowie das der „edlen Wilden" überhaupt zum Modernisierungsdiskurs verhält, den das Skandinavische in den meisten anderen Beiträgen vertritt, liegt natürlich außerhalb Rahmens von Burnetts Untersuchung. Der Band als ganzer wirft jedoch derartige Fragen auf: Wenn die skandinavischen Länder dezidiert regressive (z.B. Kap. 7, 8) wie progressive Tendenzen (Kap. 9, 10, 11) gleichsam bedienen, was macht dann das „Making of the Nordic Region" aus? Der Band von Jonas Harvard und Peter Stadius gibt durch seine unterschiedlichen und interessanten Fallstudien neuen Anlass zum Nachdenken über das Konzept des Nordischen, doch das „distinctive profile" oder gar „the recurring idea of a shared Nordic *identity*" (meine Hervorhebung; AH), die der Klappentext des Bandes in Aussicht stellt, ergibt sich nicht – was auch kaum möglich ist, wenn man Wahrnehmungsdiskurse und „branding"-Strategien untersucht.

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Takashi Irimoto, *The Ainu Bear Festival*, Sapporo: Hokkaido University Press 2014, ISBN 9784832903685, 291 pp.

Takashi Irimoto's *The Ainu Bear Festival* is the first real comprehensive study of this ritual among the Ainu, the indigenous people of Hokkaido, the Kurile Islands and southern Sakhalin, who traditionally subsist on hunting, fishing and gathering. The study is based on an anthropological approach which the author calls *shizenshi* ['naturography'] in Japanese. This denotes an attempt to describe and analyze human cultural behavior both systematically and holistically, taking social as well as biological and ecological aspects into account. It seems to be similar to what, in the Euro-American anthropological tradition, has been called *cultural ecology* or *human ecology*. Irimoto's study also includes a survey of the historical and regional variations in what can be termed "the Ainu bear festival."

The Ainu bear festival is a complex ritual in which the spirit of a slain bear is "sent off," or rather sent *back* to where it is supposed to have originated. In the traditional Ainu conception a bear was an incarnation of a *kimun kamui*, 'mountain deity,' just as every animal and plant was a physical expression of the *kamui* of its species. Game animals were conceived of as deities visiting the realm of humans (*ainu moshir*). In the belief system of the Ainu the fire deity, *ape kamui* or *ape huchi* ['old lady of the fire'], invited *kimun kamui* to come to the human village in the shape of a bear, through her envoy, a hunting dog (*mintar us kur*, 'the deity residing in the yard'). *Kimun kamui* visited people only to receive appreciation and gifts before it returned to the realm of the deities (*kamui moshir*) in the sky. When the *kimun kamui* returned home s/he invited the other deities to feast on the gifts received, which came in the form of food (millet cakes), drink (sake) and *inau* (a particular form of offering sticks with wooden shavings). The deity thereby gained a higher status among its own kind and encouraged other *kimun kamui* to pay visits to the *ainu moshir*. The gain for the humans in this reciprocal exchange was the meat, the hide and the gallbladder from the bear, but also that the correct treatment of the bear would keep "bad" *kamui* away. Thus, as Irimoto makes clear, the bear festival is not a sacrifice to deities or other beings, but the treatment of a deity itself and as such, in Irimoto's analysis, it is an exchange between the realm of the humans and that of the deities, with the bear/deity functioning as the messenger between them.

There were actually two types of bear festivals among the Ainu, one for the sending off of a hunted wild bear and one for the sending off

of a 2–3 year old bear cub, reared from early infancy in an Ainu village. The first mentioned ritual was called *omante* ['sending off'], a term also used for minor rituals connected with "sending off" other game animals and birds. The term *iomante* [literally: 'sending off a thing'] was reserved exclusively for the ritual attending the slaying and sending off of a bear raised in an Ainu village. Historically ceremonies and rituals involving slain bears are common among many hunting and gathering peoples in the circumpolar area, from Scandinavia to Labrador, and in many ways have been the most prominent hunting ritual among these peoples. This alone makes the book an important contribution to the comparative study of hunting and bear rituals in northern areas, even if the practice of rearing cubs—conditioned partly by the sedentary living of the Ainu—particularly for such an event is peculiar to the Ainu and a couple of their neighbouring peoples (e.g. the Nivkh on Sakhalin and on the mainland around the mouth of the Amur River).

Irimoto meticulously and systematically presents the various aspects of the ritual: the technical and material, as well as the symbolic, aspects of the hunt; the preparation for and execution of the feast in the village (Ch. 1–2); regional differences in the ritual among various groups of Ainu (Ch. 3); and historical variations in the festival, from the earliest recorded traces of it from the end of the sixteenth to the twentieth century (Ch. 5). One cannot but admire the author's detailed and careful comparisons of the festival's regional and historical variations.

In the analysis of the significance of the bear festival (Ch. 4), Irimoto points out the many aspects of such an elaborated ritual. Basically it was what the author calls an "active behavioral strategy for hunting success," but he also discusses the festival's significance in displaying and establishing social ranking among the Ainu. The festival was organized, on a rotating basis, by different local units, which were based on patrilineal descent. These units formed social and political groupings, and seatings during certain phases of the ritual were assigned according to rankings based on age, gender and political power within the groups. Invited guests also had their fixed seats and positions in this system, but during the festival seats and roles were exchanged, which Irimoto interprets as expressing the fundamental egalitarianism of Ainu society. This paradox is explained by a fusion of two conflicting principals—the principle of egalitarianism stemming from the hunting and gathering roots of Ainu culture, and that of social differentiation and ranking deriving from the Ainus' involvement in trade with outside communities (in the feudal Japanese shogunate).

Irimoto also shows how the Ainu bear festival was a part of the

trading system with the Japanese—bear furs and gallbladders were important exports and the production of millet cakes and sake depended on imported goods. Thus, from the Ainu perspective, the festival meant exchanges of goods between not only the deities and the Ainu, but also between the Ainu and the human environment surrounding them. The wealth and prestige—expressed in concrete terms in imported goods such as swords, costly garments and vessels for brewing sake—accumulated by the chieftains were displayed during the festival, and the ritual therefore functioned as a way of both manifesting and generating the prestige of the Ainu elite. However, the event also meant that wealth was distributed among the people, which, according to Irimoto, reveals the underlying egalitarianism of Ainu society. The manifestation of egalitarianism seems less striking and convincing to me than the display of the hierarchical system in the rites described in the book.

In Irimoto's analysis the bear festival as a whole, as well as its various constituent elements, is a manifestation of what he calls the "original oneness" that the Ainu supposed existed among humans, animals and deities. Just as bears were only temporary incarnations of deities, humans were also temporary forms. Originally humans were of the same essence as *kamui*. The dual opposition between these different forms was not everlasting, and during the festival the boundaries between nature and supernature were removed so that humans and the deity enjoyed the feast together. As Irimoto contends in his concluding chapter (Ch. 8), in hunting, where humans kill animals, a dualism is inevitable, but the "concept of original oneness integrates the two conflicting views of the oneness and dualism seen to exist between man and nature" (p. 257). Actually, Ainu views on humans and *kamui*, as well as on the relation between them, are somewhat underdeveloped in Irimoto's book. As a reader unfamiliar with Ainu culture I therefore found it very useful to consult Takako Yamada's study *The World View of the Ainu* (2001), which is equally concise and systematic, and an excellent companion to *The Ainu Bear Festival*.

From the late nineteenth century Ainu society underwent considerable changes when modernization and a shift in livelihood away from hunting and gathering began. It was also at that time that the Ainu ethnopolitical movement took its first steps. This movement intensified in the 1960s, resulting among other things in the New Ainu Law—passed in Japan in 1997—which stipulates an annual budget for the restoration, dissemination and teaching of Ainu culture. In 1955 the bear festival was banned by the governor of Hokkaido in response to pressure from animal rights organizations. Nevertheless occasional performances of the

festival have continued, mostly as tourist attractions and to record traditional culture. In Chapter 5 Irimoto recounts an attempt in 2005 to revive the festival. Just as when he describes the historical and traditional festival, he meticulously notes all the details of the present day festival and the complex social and cultural system in which it was enacted. He concludes that the incentives for enacting the festival today are primarily political, with reference to both ethno-/identity politics and the internal power struggles among various Ainu descent groups. But Irimoto also traces what seem to be sincere beliefs in the *kimun kamui* and in the necessity of "sending off" the spirit of the bear. The in-depth description of the many aspects of the present day ritual also shows how all these incentives are contested among the Ainu and give rise to internal debates and conflicts.

The main strength of *The Ainu Bear Festival* is Irimoto's detailed and multifaceted approach to the subject—behind the book lies an enormous amount of thorough research work. His conclusion (Ch. 8) about the ideas of "original oneness" and "reciprocity" are most interesting and deserve to be elaborated on further with additional materials. He considers that these ideas are not only to be found in traditional Ainu culture, but constitute part of the original nature of human mentality, and that humans have moved away from these ideas through evolution, to the detriment of human societies' relations with the natural environment (hence the global environmental crisis). Admittedly, Irimoto presents some comparative examples to support this claim, but in my opinion the conclusion does not appear to be compellingly derived from the empirical material presented in *The Ainu Bear Festival*.

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Iain G. MacDonald, *Clerics and Clansmen. The Diocese of Argyll between the Twelfth and Sixteenth Centuries* (The Northern World 61), Leiden & Boston: Brill 2013, ISBN 9789004185470, xlvii + 417 pp., index and illustrations.

The diocese of Argyll is situated in western Scotland, on the northern periphery of the medieval Western Church. There, the barren landscape is intersected by the sea, with high mountains sometimes plunging directly into the water. Beyond the borders of the diocese, further out to sea, are the Hebrides and the monastery of Iona, well-known even today. According to tradition, the Irish monk Columba arrived there in the year 563 and founded the monstery that became the base for the mission in Scotland. After a long process, this mission eventually led to the establishing of the diocese of Argyll during the twelfth century, with its episcopal see situated on the island of Lismore. The whole process probably mirrors tensions between the Scotish monarchy and the Church in the Irish Sea area.

Iain G. MacDonald's monograph is based on his PhD-thesis from the University of Glasgow in 2009. The aim of his study was to analyze the role of the secular clergy in the diocese and, thus, how the Church functioned at the most basic local level. His topic is important, since our knowledge of really local conditions, especially in the Northern European fringe areas, is poor. He also asks whether any apparent differences can be observed between how the Church functioned in the distant, relatively isolated and poor Argyll compared with other dioceses in the Western Church. MacDonald points out that there is no similar study regarding Scotland, but with reference to the source material he has been able to establish a link with similar investigations made for Norway and Sweden by Professors Torstein Jørgensen (Stavanger) and Kirsi Salonen (Turku/Åbo) respectively. Unfortunately he had neither the intention nor the possibilty (the monograph is already comprehensive enough) of studying the theology or devotion of the clerics or the laypeople. One can hope that he will return to such a study, if it is at all possible, but lack of source material might be an obstacle.

The main sources are the records held in the Papal Chancery and in the Penitentiary. Supplications to obtain legal decisions from the Church's highest authority were sent to both places from all parts of the Western Church. These mostly concerned dispensations of various kinds. In this instance, researchers into Scotland's past are fortunate, because the source material, while scanty, is more comprehensive than that from the rest of the church provinces in Northern Europe. MacDonald

is of the opinion that this is due to the fact that from 1189–1192 Scotland was subject to the Pope in a special way, partly in contrast to the Church in England. Moreover, Scotland had no metropolitan see until 1472, when the country was placed under the Archbishop of St. Andrews. All of this led to the Scots being more inclined to turn to the Pope than to others for authoritative answers. There are approximately 400 supplications to the *Curia* from the clergy in Argyll between 1342 and 1560—when a decision taken in the Parliament ushered in the Reformation in Scotland. The supplications were submitted by the clerics themselves and, consequently, are very useful sources for anyone attempting to elucidate their origins and their ties to local magnates.

The monograph is divided into two main parts. The first (Chapters 1 and 2) deal with the origin of the diocese, the development of the episcopal see and the cathedral chapter. The results presented in this part constitute the historical framework for the second main part which deals with the individual clerics with regard to their descent, education, qualifications concerning pastoral care, and the extent to which they fulfilled the requirement for celibacy. At the end of the thesis there is, among some other things, a very useful register of 489 priests in Argyll (pp. 274–357) containing basic information about them together with references to the sources.

MacDonald works methodically and clearly with his source material and constantly refers to earlier research, of which there is not very much. The way he works and the clarity with which the results are presented makes them convincing. He often argues against and/or corrects earlier scholars' relatively negative opinions about the churchly life in Argyll. One is struck by Mac Donald's well-balanced arguments and critical approach to the records and also by his ability to elucidate complex developments. Moreover, the monograph is mercifully free from overburdening theoretical reasonings.

In the first chapter, the author makes it clear that bishops were active in Argyll during the early Middle Ages, that is, before the diocese came into existence during the twelfth century, with Lismore being a religious centre from the ninth century. He very competently shows how, through a slow process, the religious centre gained ascendancy over the surrounding territory, with the involvment of the secular power. Furthermore, he demonstrates how communties and cathedral chapters appointed bishops and the sort of advantage that could be achieved by establishing a diocese in accordance with the secular magnates.

As part of the historical framwork there is a discussion of the emergence of the cathedral chapter and its nature. However, a clearer picture

can be drawn from the end of the fourteenth century with the aid of the petitions to the *Curia*. Other important questions are raised regarding how the elections of bishops took place, who the prebendaries were, who formed part of the cathedral's clergy and which were the origins of the clerics regarding birthplace and kindred. Thus, the monograph offers interesting material for asking corresponding questions regarding the dioceses in the Scandinavian realms, where the source material is even scarcer than in Argyll and not so easily dealt with.

In late medieval descriptions as well as earlier research it was maintained that Argyll was poor, rural and an unsuccessful diocese. MacDonald, therefore, tries to understand the history of the cathedral and of the episcopal see from the perspective of the great changes that affected the diocese during the latter part of the Middle Ages, that is the fourteenth and fifteenth centuries. The second chapter treats questions about patronage, the appointment of bishops and the bishops' relationships with the members of the cathedral chapter. According to the author there is very little to indicate that the poverty of the diocese had any negative effect on the quality of the bishops. His competent analysis also presents a very plausible explanation for why the bishops did not reside in the cathredral on Lismore from the middle of the fifteenth century: It was connected with political and economic change; so, in that sense the poverty of the diocese did play a crucial part.

MacDonald finds explanations for the changes mostly in material reality, where money, as well as royal and noble claims to supremacy, played a decisive role and not in spiritual aspects or the decrees of ecclesiastical law. It is completely feasable to see the development of church history in Argyll mainly from that perspective. But the question of language also played certain part as it relates to the local and regional identity: Could the person appointed speak Gaelic? The author points out that the increasing number of papal appointments (provisions) from the 1380s onwards diminished the status of the bishop among his flock and led to its becoming less secure as the clercis could appeal to a higher court.

Chapter 3 introduces the investigation of the origins of the secular clergy, the number of priests and their advancements. During the period between 1342 and 1560 there are known to have been approximately 419 secular clerics from the diocese of Argyll, of whom 354 certainly held benefices there. MacDonald maintains convincingly that it is not meaningful to make statistical comparisons with other dioceses, since only those priests who turned to the *Curia* in order to obtain specific benefices appear in the records. He also shows that the clerics were mainly of local

descent, serving the church in their home parishes. Most of them belonged to the lesser nobility.

In Chapter 4 Macdonald shows that the requirement for celibacy was not always practised in Argyll, as was the case also in the rest of the Western Church. However, only some 10 per cent of the total number of priests seem to have been sons of priests. This appears to me to be a very low figure taking into account the free attitudes towards sexual life that, according to the author, were prevalent in the societies studied together with the fact that, also according to the author, sons of piests could hardly become anything other than priests themselves. One is sometimes forced to ask what conclusions can be drawn from the sources when, for instance, the number of records does not even amount to ten over a period of ten years. In this instance the author does not seem to provide a full explanation for the low figure. However, he considers it reasonable to correct the opinion of some earlier research that the Western Church would have collapsed without the sons of priests. Did the sons of priests inherit their fathers' benefices? The author points out that this only happened with "a surprisingly limited number of benefices," the explanation being the increasing frequency of papal provisions. Consequently those who wanted to acquire a benefice, had to fight for it rather than inherit it, more often than previously, which seems to be a probable interpretation.

The education at universities and the classical education of the secular clergy is the subject of Chapter 5. It appears that, during the whole period studied, around a third of those who acquired benefices in Argyll had a university education. According to MacDonald that should be considered a respectable figure compared with dioceses in England and Germany during the late Middle Ages. Most of those who had such an education went to the nearby universities in St. Andrews (founded 1410) and Glasgow (founded 1451), only a few went to England or the Continent. I find it striking that we no longer know where a large number of the clerics educated at universities received their training (see Table 9).[1] On the other hand, this concerns comparatively few individuals, only around 120 for the whole period of 218 years. For instance, between 1342 and 1360 only two priests had studied at the university, but we do not know where. The tendency, however, was for expectations that priests would have a higher education increased from the middle of the fifteenth century.

MacDonald relates the university-education of the clergy to the priests' kinship with various clans and finds that the differences lie in the degree of lay control over the churches; the more powerful the lay

control the fewer the number of clerics who had studied at the university. Perhaps such a conclusion need to be better substantiated.

According to the author a classical education in Latin was probably given locally in Argyll by the learned orders. At the same time he points out that the source material is too fragmentary to allow any definite conclusions to be drawn.

The final chapter deals with how well the priests took care of their benefices. Unfortunately, Argyll lacks the type of important source material that an episcopal register provides. Such a source would contain information about the priests' presence in their parishes and the way they served the *cura animarum*. The supplications to the *Curia* reveal that priests held more than one benefice at a time. Furthermore, it is obvious that not all those holding benefices were ordained priests when they received them and in many cases were never ordained, which constituted a problem in Scotland throughout the late Middle Ages. As a consequence, those who were in the lower orders of the ecclesiastical hierachy were unable to administer the sacraments as required by canon law and so had substitutes, or simply disregarded canon law.

To conclude, this study deals with many questions that are important for an understanding of the late medieval Western Church in the northern periphery, and which are also relevant in the Scandiavian kingdoms. As the author notes in the conclusion, more investigations concerning the clergy on the dioceasan level need to be carried out for the whole of Europe. Iain G. MacDonald's extraordinarily skilful monograph should stimulate scholars to apply his questions and methods to other dioceses in order to establish whether his overall conclusion is applicable everywhere else: The diocese of Argyll—despite its poverty and geographical position—did not differ appreciably from other dioceses in Scotland or elsewhere; it was ordinary. As is true of many dioceses, in my opinion it still remains to be seen whether the late medieval Church really exhibited such homogeneity, depending, of course, on the criteria you use for determining what is ordinary.

At all events *Clerics and Clansmen* is a most valuable, inspiring and thoroughly researched monograph. MacDonald has an excellent command of his source material, and he is capable of scrutinizing it critically as well as relating it properly to earlier research in the field. Therefore the book is very easy to embrace. The fact that the conclusions are in some respects open to discussion only raises its scholarly value.

NOTES

[1] On p. 206 it is stated that "just under a third" while on p. 232 it says that "over a third" had a university-education. It is not clear how MacDonald has arrived at the estimates. It would probably have been better to give actual numbers. There are 9 figures, 6 maps and 12 tables in the book, all for some unknown reason placed together in the beginning (pp. xi–xl), whereas one would prefer to find them on the pages with the explanatory text.

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Osmo Pekonen & Anouchka Vasak, *Maupertuis en Laponie. À la recherche de la figure de la Terre*, préface d'Élisabeth Badinter, postface de Jean-Pierre Martin, Paris: Éditions Hermann, 2014, ISBN 9782705688677, 234 S.

Der vorliegende Band vereint zum ersten Mal jene vier Schriften, in denen Pierre-Louis Moreau de Maupertuis (1698–1759, Biographie S. 13–15) über die von ihm geleitete Lappland-Expedition (1736–1737) berichtet, welche maßgeblich zur Klärung der damals intensiv diskutierten Frage nach der Gestalt der Erde beitrug. Während die Zeugnisse der fast zeitgleich unternommenen Anden-Expedition La Condamines (1735–1744) bereits mehrfach in wissenschaftlichen Ausgaben zugänglich gemacht wurden, harrten die Texte Maupertuis' lange einer entsprechenden Aufbereitung, so dass sie bislang nur in verstreuten Editionen vorlagen. Das Verdienst der mit ausführlichen Anmerkungen versehenen und akribisch recherchierten Ausgabe von Pekonen und Vasak in der seit 2012 gut eingeführten Reihe „MétéoS" der Éditions Hermann beschränkt sich jedoch keineswegs auf die Präsentation der Schriften selbst, sondern ergänzt diese durch mehrere Beiträge (Élisabeth Badinter, S. 5–7, Osmo Pekonen, S. 11–57, Anouchka Vasak, S. 59–100, Jean-Pierre Martin, S. 209–216), welche das Textkorpus in seinem zeitgenössischen Kontext verankern und über seine historische Bedeutung für die Entwicklung der Naturwissenschaften (Geographie, Meteorologie etc.) hinaus auch seine ethnographische, anthropologische und literarische Dimension in den Blick nehmen, wodurch der Band einen interdisziplinären Ansatz aufweist, der letztlich der umfassenden Wirkung der Werke Maupertuis' allein gerecht werden kann.

Die vier edierten Schriften Maupertuis' gehören unterschiedlichen Textgattungen an und waren für eine jeweils andere Leserschaft bestimmt, von den Gelehrten der Pariser Académie Royale des Sciences (welche die Expedition initiiert hatten) bis zu einem breiteren, kultivierten Laienpublikum, so dass die Tonlage der Texte oszilliert zwischen einem objektiven, wissenschaftlichen Diskurs über messtechnische Ergebnisse und andererseits einer episch ausgemalten, mondäne Interessen bedienenden Beschreibung einer Abenteuerfahrt. Entsprechend trägt das Textkorpus in seiner Gesamtheit Züge einer wahren Medienkampagne des Autors („opération médiatique", S. 32), der seine Forschungen als eine Art „agent publicitaire" (S. 5) gezielt einer größeren Öffentlichkeit unterbreitet – ein Novum in der Wissenschaftsgeschichte („une première chez les académiciens", S. 6; „Maupertuis a renouvelé la façon de ‚faire la science'", S. 70). Im einzelnen sind dies folgende Texte (in der chronologischen Reihenfolge ihrer Abfassung): zwei an adelige

Zeitgenossen gerichtete Briefe, 1) die (an einen nicht identifizierbaren d'Argenson adressierte) *Relation de la Laponie par quelques habiles mathématiciens français qui sont allés dans le Nord pour y faire des observations, datée du 20 septembre 1736 et communiquée par un seigneur qui aime les sciences* , und 2) die *Lettre de Maupertuis à Mme de Verteillac;* sowie zwei wissenschaftliche Abhandlungen, 3) der *Discours qui a été lu dans l'Assemblée publique de l'Académie Royale des Sciences, le 13 novembre 1737, sur la mesure du méridien au Cercle polaire* (1738 abgedruckt in Maupertuis' großer Schrift *La Figure de la Terre)*, und 4) die *Relation d'un voyage fait dans la Laponie septentrionale, pour trouver un ancien monument.*

Ungeachtet der anvisierten Breitenwirkung durch die spektakuläre Aufbereitung der „heroischen" Erlebnisse folgte Maupertuis' Werbekampagne keine unmittelbare Anerkennung des wissenschaftlichen Erfolgs, denn seine Publikationen führten keineswegs sofort zur Durchsetzung der neu gewonnenen Erkenntnisse über die „figure de la Terre". Zwar war es der Expedition gelungen, den Nachweis zu erbringen, dass die Erde keine Kugel, sondern ein an den Polen abgeplattetes Ellipsoid ist, wie Newton in seiner Gravitationstheorie behauptet hatte. Doch begegnete die Mehrheit der französischen Gelehrten (Fontenelle, Réaumur u.a.), die der cartesianischen Wirbeltheorie anhingen, diesen Einsichten überaus skeptisch, zumal die führenden Geodäten Frankreichs, Vater und Sohn Cassini, aufgrund ungenauer Meßergebnisse nach wie vor für eine Aufwölbung der Pole plädierten, das heißt eine „Zitronenform" der Erde (zur zeitgenössischen Diskussion siehe S. 16–20). Die Anerkennung der von Maupertuis nachgewiesenen „Mandarinenform" erfolgte erst mit der öffentlichen Korrektur seitens Cassini III. im Jahr 1740 und vor allem durch die Rückkehr der Anden-Expedition La Condamines, deren Berichte Maupertuis' Erkenntnisse voll und ganz bestätigten. Die anfängliche Ablehnung der Thesen Maupertuis' erklärt sich letztlich aus einer vielschichtigen Gemengelage von Interessen, namentlich einer von nationalen Vorurteilen bestimmten Abwehrhaltung gegen die Newton'sche Physik, sowie einer grundsätzlichen Skepsis gegenüber einer jungen Generation von Wissenschaftlern, die in kürzester Zeit und ohne Umstände effektive Ergebnisse lieferte.

Bei der von Maupertuis als „Laponie" bezeichneten Region, welche ausgewählt wurde, um mittels Triangulation einen möglichst nördlich gelegenen Meridiangrad zu messen,[1] handelt es sich genau genommen um Tornedalen (einst Teil der schwedischen Provinz Lappland), das heißt das Tal des zirka 600 Kilometer langen Flusses Torniojoki, der in den Bottnischen Meerbusen mündet und in geradezu idealer Weise in Nord-Süd-Richtung fließt. Trotz der relativ leichten Zugänglichkeit des

Tals und der Möglichkeit, auf dem vereisten Fluss die Basislinie zu messen (und die Ausrüstung zu transportieren), sahen sich die Mitglieder der Expedition[2] zahlreichen Schwierigkeiten gegenüber, die sie dank guter Organisation bravourös meisterten. Zu der eisigen Kälte[3] und dem hohen Schnee im Winter sowie der Mücken- und Fliegenplage im Sommer kam die Tatsache, dass für die Einrichtung der Meßpunkte Berge erklommen und Bäume gerodet werden mussten. Auch wenn Maupertuis' Schilderung der Widrigkeiten dem epischen Stilregister geschuldet ist und mit dem Dramatischen den eigenen Heldenmut hervorhebt, so lässt doch ein Vergleich mit den Berichten anderer Teilnehmer, insbesondere mit dem *Journal d'un voyage au Nord fait en 1736 & 1737 par M. Outhier, prêtre du diocèse de Besançon, correspondant de l'Académie Royale des Sciences* (1744), den Schluss zu, dass die zu bewältigenden Herausforderungen zum Teil durchaus „inhumaines" (S. 6, S. 83) waren. Aus diesen Quellen erfährt man auch einiges über unliebsame Ereignisse, die Maupertuis selbst geschickt zu verschweigen wusste, beispielsweise einen Sturz vom Schlitten und einen Schiffbruch bei der Rückkehr nach Stockholm, ganz zu schweigen von der „affaire des deux Lapones", einem galanten Abenteuer mit zwei Schwedinnen, welche der Mannschaft nach Paris folgten und dort für Aufsehen und Spott sorgten.

Eine große Stärke dieser kommentierten Edition ist die ausführliche Analyse der Vielzahl an rhetorischen Mitteln, derer sich Maupertuis insbesondere im sorgfältig strukturierten *Discours* (Text 3), dem berühmtesten seiner Lappland-Berichte, bedient. Ursprünglich als Gattung der öffentlichen Rede konzipiert und noch unter dem Titel *Discours* in *La Figure de la Terre* publiziert, erhält der Text in den folgenden Ausgaben den Titel *Relation du voyage fait par ordre du Roi au Cercle polaire pour déterminer la figure de la Terre*, womit er zum Reisebericht gerät, der das narrative Element betont und alle Kennzeichen dieser Textsorte aufweist: die typische Kreisstruktur (vom Aufbruch zur Rückkehr), die chronologische Anlage, die Betonung des persönlichen Erlebens und damit die auf eine Autorität gestützte Behauptung von Authentizität, das erhabene Stilregister des Epos sowie ethnographische Beobachtungen unter Hervorhebung der Alterität des Landes (S. 81). Was diesen letzten Aspekt betrifft, so nimmt Maupertuis zwar zahlreiche Topoi aus diversen Prätexten auf („descriptions amusées, souvent ironiques, parfois sidérées, des Lapons", S. 65), doch fällt die Beschreibung des Landessitten insgesamt recht gemäßigt aus („assez mesurée", S. 84), bisweilen zeichnet sich sogar Sympathie ab („personnes fort bien faites et fort aimables", S. 68). Nach den Vorgaben der zeitgenössischen Klimatheorie wird der Volkscharakter durch den Einfluss des langen Winters erklärt,

wobei Maupertuis einer der ersten ist, der „climat" zugleich im alten und neuen Wortsinn begreift („Region" bzw. „Klima", S. 18), als er eine unglückliche Neigung der Erdachse für die Dunkelheit einer einst helleren Region verantwortlich macht (S. 86). Gelegentlich weitet sich die ethnographische Perspektive zu einer „écriture mythographique" (S. 94), die den Charme alter Legenden heraufbeschwört, so bei der Beschreibung der Rentiere als Fabelwesen oder der gespenstischen „vapeurs", die aus Gebirgsseen aufsteigen. Dieser Aspekt dominiert auch im vierten Text der Ausgabe, dem Bericht über eine Reise zum „Stein von Käymäjärvi" mit seinen runenähnlichen Inschriften.

Bisweilen weisen die Texte sogar poetische Passagen auf, etwa bei der Beschreibung des Nordlichts: Metaphern und Binnenreime evozieren die Magie der Naturphänomene, beschrieben wird ein wahres Spektakel von großer „Erhabenheit", vor dem der Mensch in Erstaunen und Bewunderung verharrt. Bei der Darstellung der Wetterereignisse versteht es der Autor, durch suggestive stilistische Mittel seine individuelle Empfindung mitzuteilen: durch die Aufzählung von Beispielen, hyperbolische Vergleiche, ein der Tragödie entlehntes Vokabular, adverbiale Intensivierungen etcetera gelingt es Maupertuis, eine Art persönliches Wettertagebuch anzulegen („un quasi-journal météorologique", S. 83), wie es erst gegen Ende des Jahrhunderts im Zuge von Sensualismus und „cénesthésie" üblich wurde.[4] Der Autor nimmt also im Verlauf seiner Berichte verschiedene Rollen ein: mal ist er reiner Berichterstatter, mal persönlich Betroffener („pur rapporteur", „subjectivité assumée"), das heißt er ist stets um einen Ausgleich zwischen „effets littéraires et propos scientifiques" (S. 88) bemüht, kurzum: Maupertuis versteht es durch eine sorgfältige Selbstinszenierung, der Nachwelt das Bild eines „homme d'action, de lettres et de science" (S. 99) zu hinterlassen.

Neben der „literarischen" Würdigung des Textkorpus heben weitere Beiträge des Bandes die Bedeutung der Lappland-Expedition für die Geschichte der Naturwissenschaften hervor, insbesondere für die Entwicklung der Meteorologie beziehungsweise speziell der Temperaturmessung in Skandinavien („Retombées météorologiques", S. 38–57) und für die internationale Polarforschung („Les Français et le Grand Nord", S. 209–216), auf die hier nicht weiter eingegangen werden soll. Gemeinsam ist allen Artikeln, dass sie die besondere Bedeutung hervorheben, die die Berichte Maupertuis' (und auch die anderen Publikationen der Lappland-Expedition) für die Vorstellung haben, die sich eine gebildete französische Leserschaft für lange Zeit vom „Hohen Norden" machen sollte. Von großer Relevanz sind dabei auch die Abbildungen, die das *Journal* Outhiers zieren und die der vorliegende Band in großen Teilen

reproduziert (siehe die „Table des illustrations" S. 230). Welche Verbreitung die Schriften Maupertuis' und Outhiers erlangten, belegt die ausführliche Bibliographie (S. 217–229). Diese belegt auch die umfangreiche Forschungsliteratur, die bereits zu Maupertuis und zur Lappland-Expedition vorliegt und auf die auch im Fußnotenapparat stets verwiesen wird. Doch weist die vorliegende Publikation durch ihren innovativen Ansatz über die bisherige Forschung hinaus, indem das hier edierte Textkorpus erstmalig als eine Einheit gesehen und zudem aus literaturwissenschaftlicher Perspektive betrachtet wird, so dass die Mechanismen offengelegt werden, die letztlich für die außerordentliche Wirkung der Lappland-Berichte Maupertuis' verantwortlich sind.

NOTEN

[1] Die Ausgangsüberlegung: Wenn dieser weit im Norden gemessene Meridiangrad länger sein sollte als jener, der in Frankreich bzw. in den Anden (in Äquatornähe) gemessen würde, wäre der Beweis erbracht, dass die Erde an den Polen abgeplattet ist.

[2] Der Abbé Réginald Outhier als korrespondierendes Mitglied der Académie; die jungen Wissenschaftler Alexis-Claude Clairaut (als Mathematiker für die trigonometrischen Berechnungen zuständig) und Pierre-Charles Le Monnier; der schwedische Astronom Anders Celsius; der Sekretär Sommereux; der Zeichner Antoine-Étienne Herbelot; als Assistent der frankophone Anders Hellant; sowie ein Koch und etliche Diener.

[3] Auch wenn die behauptete Tiefsttemperatur von -37 Grad Réaumur, d.h. -46 Grad Celsius, für den 6. Januar 1737 letztlich nicht glaubhaft ist, da das benutzte Quecksilberthermometer unterhalb des Gefrierpunktes von -38,8 Grad Celsius keine Ergebnisse mehr liefert (siehe die Ausführungen S. 38–50).

[4] Siehe dazu etwa Pachet 1990; Vasak 2007; Becker (Hg.) 2012; Corbin (Hg.) 2013.

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Grete Swensen (ed.), *Å lage kulturminner. Hvordan kulturarv forstås, formes og forvaltes* ['Making cultural heritages. Perceiving, shaping and preserving cultural heritage'], Oslo: Novus Forlag 2013, ISBN 9788270997336, 370 pp.

This book offers a substantial reading for contemporary experts on cultural heritage, who are expected to be up to date on current research, who face better-informed citizens than ever before and who as trustees have to act quickly, competently and cost-effectively. Since the early 1990s research has been enriched by a more reflective and dynamic concept of cultural heritage than previously.

This anthology of texts, originating from a conference, has a rich thematic introduction, where the editors attempt to frame its purpose. We are told on p. 11 that there is already an extensive literature concerning the development of cultural heritage preservation and its prevalent value criteria. The intention is to use these texts as a basis for new alternative forms of such preservation. This is not to be done by providing concrete preservation instruments or tools but by stimulating a critical as well as a constructive reflection on what constitutes a cultural heritage, what values it embraces, how it is perceived, and what the current consequences are for its preservation. That is, how cultural heritage is perceived, shaped and preserved.

This is followed by 15 chapters in which more general issues are discussed against an empirical background. Most of the contributors are Norwegian experts, but a few Danish and one Swedish researcher have also contributed. All the chapters are written in their author's native language.

The theoretical orientation of the texts leans towards a general social constructivist concept of cultural heritage that has, at least rhetorically and reflectively, replaced the previously predominant essentialist perception in which the objectivity of these aesthetic and cultural history values were taken for granted. Within this framework an exciting variety of tracks of reflection are presented, in most cases elucidated with refreshingly and rewardingly concrete examples. I will highlight some of the most interesting of these reflective tracks.

The impact of the concept of an existence and strength of the Authorized Heritage Discourse (AHD) is evident. It adheres to a tradition emanating from Michel Foucault's power and discourse analysis which focuses on the power of knowledge and language in shaping reality. The paradigmatic cultural heritage research reference is to Laurajane Smith's work *Uses of Heritage*, from 2006. The concept, which has had

a great impact on cultural heritage studies in recent years, may seem to constitute an adequate description of the hegemony exercised by formally authorized cultural heritage over the interpretation of landscapes and of the past. One advantage of this concept is its usefulness as a framework within which it is possible to compare fairly different empirical examples (see Hammami 2012).

There are, however, several articles that point out how more complex exchanges make it difficult both to identify a single predominant discourse and to establish how strongly it affects perceptions and actions. The circulation of concepts and values between different perceptions and actors with different logics of action appears clearly in Torgrim Sneve Guttormsen's article on the Viking heritage and in Leidulf Mydland's account of the establishment of "Olavsrosa," a NGO quality assessment of "heritage offerings" in Norway. The way in which popular usages twist and displace official usage makes it less productive to use AHD in order to identify official actions.

In one of the longest and most interesting articles in the anthology Knut Fageraas describes how the establishment of a cultural heritage possessing the strongest claim to universality, a UNESCO world heritage site, in this case the Vega Islands in Northern Norway, had such a powerful effect on earlier officially protected cultural landscapes and monuments as well as on local action, despite its non-existent administrative power. Thanks to the extreme strength of support and legitimacy, community self-understanding and action horizons have been restructured. It is highly unlikely that any interested party or even coherent logic lay behind this transformation. It was and is rather an ongoing result of a series of situational adaptations and negotiations in a complex cultural and socio-economic ecology.

In her article, Anne Sætren argues that new forms of support for agricultural heritage preservation have emerged in spite of the current AHD. Naturally, it depends on how the discourse is identified. If its meaning is extended to include rural Norwegian community-based nationalism, it will be totally in keeping with the new support forms.

My comments reveal that the value of AHD as a theoretical starting point can easily become the opposite, that is a rather blunt tool for analysis, which suffers from both the strength and the weaknesses of structuralist and discursively established power concepts. The approach is somewhat arbitrary and difficult to delimit, which renders these concepts hard to test empirically and turns them into blunt instruments for understanding the actual strength of different ideas in forming perception and action. It seems hard to draw general conclusions about how far the

strength and type of relations between public and popular actors is immediately dependent on where the public institution is located. Sometimes the relationship remains strong, while at other times it weakens.

Another way of studying cultural heritage is to view it as series of performative acts, as illustrated in several articles. Lothar Diem conducts a general discussion of exchanges, while Bodil Axelsson demonstrates how the artistic configuration in two heavily institutionalized cultural heritage environments adds owner ideals that contrast with collective cultural heritage ownership, because artists hold both moral rights and copyright to their works.

This is a conflict between different logics which may increasingly come to the fore because conscious aestheticization of cultural heritage experiences and intermedia references to music, film and authorship are gaining ground in the cultural heritage sphere.

Another track includes references to Bruno Latour, where the strength of material objects, as "actants," and network mobilization of action offer a more materialistic and social approach which is more easily attached to an earlier more essentialist appreciation of the value and strength of both artifacts and buildings. This is discussed by Elin Rose Myrvoll in terms of affordances in a phenomenological tradition. In the internal cultural heritage terminology this emerges as the issue of how to perceive the relation between material and immaterial cultural heritage. Several writers, like Joel Taylor, argue that, instead of representing two opposite fundamental values, these are two aspects of every cultural heritage, because both a material bearer of some kind and an immaterial meaning production are needed in order to create a cultural heritage.

The next track consists of the field of tension between, on the one hand, securing and preserving the original authenticity of the cultural heritage and, on the other, a usage which inevitably transforms, exhausts, or develops it. Where should the lines be drawn? Torunn Selberg asks whether the difference between medieval and contemporary pilgrimages, whose journey—rather than the relics—is the goal, involves a falsification of the tradition or is necessary in order to communicate the wanderer's reflexivity in an authentic way.

Criticism both of AHD and of culture constructivism in general is implicit in Terje Brattli's argumentation that cultural heritage possesses a more fundamental and timeless dimension which lays an apolitical foundation, using materiality as a bridge, for forming ontological ties over time and across political differences of opinion. The "joint action room" establishes a present time and an arena for playing out motives of self-interest. This may be viewed as a downtoning synthesis between the old objectivist

and an altogether constructivist perception of cultural heritage.

As a whole, the anthology presents approaches that are essential for replacing an older layer of literature that looked for absolute values of an aesthetic or cultural history character. Although offering material for problematizing reflection, to what extent do these approaches support the emergence of new constructive forms of preservation? There is a lack of a comparative approach towards evaluating the extent of the writers' own conclusions. How valid are the Vega finds? How are Vikings regarded as a cultural heritage in history cultures other than the Norwegian? In her discussion, Grete Swensen tries to explain the differences in how the cultural heritage potential of prisons evolves, but this is done only in a Norwegian context, which is radically and intriguingly different from, for example, the Australian context. However, Carsten Paludan-Müller, in his comparison between various well-known world heritages for the purpose of discovering whether they are of a universalist or a hybrid character, feels quite depressed to find that they essentially reflect national ideals and narratives. Perhaps this is what is to be expected from a cultural heritage that is fished out by means of national political processes.

The major question to put, perhaps both to this and several of the other articles, is rather what effect cultural heritage experiences have on different users. Do they contribute to developing a more creative, tolerant and conflict-solving culture or not? There is no self-evident answer to the effect that some forms are better than others *per se*. A series of studies would be required to demonstrate the premises on which a cultural heritage makes the impact expected by initiators and actors at all levels, ranging from the UN via nations and regions down to local communities. Only then will we have a foundation that will enable us to state the terms in which the development of the current cultural heritage preservation will improve related values—and not the opposite.

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Kathrin Zickermann, *Across the German Sea. Early Modern Scottish Connections with the Wider Elbe-Weser Region* (The Northern World 62), Leiden & Boston: Brill 2013, ISBN 9789004248342, 272 pp.

Whereas several studies deal with Scots in the Scandinavian countries, the Scottish impact on North Western Germany remains mostly unknown. The purpose of the present book is to fill this gap in our knowledge for the period between c. 1590 and c. 1730. Its disposition in four chapters is clear, with first the geography of the Elbe-Weser region and then its general history. The reviewer can only agree with the author, when she pleads for the study of the movements of individual ships (p. 9) on the basis of customs registers from various ports. A major step in this direction was taken with the digitalization of the Sound Toll Registers (in Rigsarkivet, Copenhagen). A few imprecisions must be mentioned: The diocese of Schleswig could not be part of the Lower Saxon Circle (p. 14 n. 1), because it did not belong to the Reich, but to Denmark; Johann Friedrich was the younger brother of Duke Johann Adolf (not Adolf) (p. 18), and there was no county of Holstein-Gottorp (p. 27 n. 64); Schleswig and Holstein were duchies and were divided between the Duke of Gottorp and the King of Denmark, further, Duke Christian of Holstein-Gottorp (recte Schleswig-Holstein-Gottorp) is better known as Duke Christian Albrecht. The overview of the region's early modern history shows that many connections existed between the territories of the region of a commercial, political (and military) as well as religious nature. These are described in the following chapters.

Chapter two deals with "commercial links and mercantile networks." When (following Nina Pedersen) the author maintains that in 1589 Scots, Norwegians and Danes obtained equal status in each other's nations, it must be stressed that this had already been agreed in the treaty of 1426 . It was repeated in the treaty of 1494, which was to become the foundation of economic relations between Scotland and Denmark-Norway (Riis 1988 I: 15, 19). Zickermann finds a probable explanation for the absence of ethnically distinctive Scottish merchant communities in the different types of privileges granted by the various authorities of the Elbe-Weser region. The existence locally of a Scottish church, or at least a chapel or an altar in one of the churches, could have served as a rallying point for a Scottish community, as in Elsinore for example (Riis 1988 I: Ch. 6). One of the book's merits is its revelation that the German presence in Shetland was more substantial than has previously been assumed. Rightly, the author finds that abroad, the distinction in practice

between Scottish and English was not as sharp as in theory (pp. 112–113, 127). The reviewer's study of the Sound Toll Registers in the seventeenth century shows that if English merchants of the Eastland Company were unable to send their goods home with the company ships from the English staple at Elbing, Scottish skippers would carry them to England. The chapter contains much valuable information, but would have been easier to read, if, for example, it had included diagrams of the main networks. A list with a biography (if possible) of every Scot found would also have been a help to the reader.

Chapter 3 deals with political and military networks in the seventeenth century. Here Zickermann finds that in some cases the English and the Scots discovered a "British" consciousness (p. 135). This is very possible, as it is often when they are abroad that people discover what they have in common with their neighbours (for example British and Americans, Scandinavians among themselves etc.). Obviously, the Scot Robert Anstruther plays an important role as a diplomat, but apparently, the author is unaware that he was one of the negotiators of the peace of Knäred in 1613. He represented the Danish side while his half-brother, James Spens, appeared on behalf of the Swedes. Strangely enough, the author quotes only Steve Murdoch for information on Scottish soldiers in the service of the Danish crown, more information is to be found in Riis (1988 I: Ch. 3; 1988 II: 81–148). She mentions Christian IV's perception that Charles I had not fully delivered his promised support (p. 140). Scottish mercenaries were actually recruited in Scotland to help the cause of the Winter King and his wife (Charles's sister). Although Charles should have paid the Scots he never did so, and Christian had to pay them. Some of the Scottish mercenaries transferred their service from Denmark to Sweden after the peace of Lübeck (1629), among them was Mackay's regiment. Political motives may have played a role (p. 154) in the Scottish officers entering Swedish service, but the author does not mention the offered prospect of admission to noble rank with an estate in Sweden proper, Finland or the Swedish possessions in the Baltic region. For a younger son with no chance of inheriting a title, this must have presented a realistic and acceptable alternative.

Chapter four discusses the religious exiles in the region. Here it must be remembered that neither of the region's important cities practised tolerance; this was only the case in Glückstadt and later Altona. The level of acceptance of communities dissenting from the majority religion would thus be different from one town to another. The most important question was whether or not the Calvinists would be accepted by the Lutherans. In Denmark this was apparently no problem; in spite of dog-

matic differences the Danish Lutheran church was considered to be in communion with the Kirk (but not with other reformed communities). Whether or not a similar attitude was to be found in the Elbe-Weser region appears doubtful. Obviously, the author describes at some length the efforts of John Durie to overcome the division between Lutherans and Calvinists. The British civil war and its aftermath pushed several Calvinists into the emigration, above all to the Low Countries, but also to the Elbe-Weser region, especially after the 1680s. For political reasons, following pressure from the British, the creation of a Calvinist community was thwarted by the authorities of Bremen, but succeeded in Lüneburg, where the local duke led a policy of toleration (but only as far as Calvinists were concerned) in order to attract capable and industrious foreigners. After the Glorious Revolution it was the turn of the Jacobites to go into exile, a few were to be found in the Elbe-Weser region, but most went to the Catholic countries. When the author mentions James III (p. 231 n. 253) in this context she is referring to the Old Pretender, but it would have been more natural to call him James VIII/III.

The book fills a gap in our knowledge and can thus be recommended; we now know that there was a certain Scottish impact on the Elbe-Weser region regarding trade, religion and politics. In spite of the criticisms mentioned, much useful information is to be found in the book which could be the starting point for further research.

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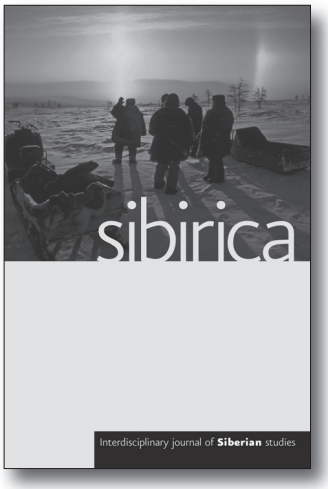

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