



GREAT POWER COMPETITION IN THE ANTHROPOCENE ARCTIC

**Proceedings of an
Institute of Advanced Studies (IAS)
Spotlight Series Workshop**

**Loughborough University
December 2020**

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North American and Arctic Defence and Security Network (NAADSN) /
Réseau sur la défense et la sécurité nord-américaines et arctiques (RDSNAA)
c/o School for the Study of Canada
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Loughborough
Leicestershire, United Kingdom LE11 3TU

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LIBRARY AND ARCHIVES CANADA CATALOGUING IN
PUBLICATION

Great Power Competition in the Anthropocene Arctic / Edited by Duncan
Depledge.

Published in print and electronic formats.
ISBN: 978-1-989811-16-0 (e-book)

1. Arctic regions—Climate change. 2. Arctic regions—Geopolitics. 3. Arctic
regions—Defence and Security. 4. Anthropocene. I. Depledge, Duncan, editor.
II. Title: *Great Power Competition in the Anthropocene Arctic: Proceedings of an
Institute of Advanced Studies Spotlight Series Workshop*. III. Series: NAADSN
Special Reports.

Designer and layout: P. Whitney Lackenbauer
Cover photos: Ray Chiasson
Copy editor: Jill Barclay

Distributed by the North American and Arctic Defence and Security Network
(NAADSN)
Distribué par le Réseau sur la défense et la sécurité nord-américaines et arctiques
(RDSNAA)

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Loughborough University,
8-9 December 2020

Simon Dalby
Mia Bennett
Ingrid A. Medby
James Rogers
Geoffrey Sloan
Caroline Kennedy-Pipe

Moderated by Duncan Depledge and Klaus Dodds

Foreword

Professor Steve Rothberg

Pro-Vice Chancellor for Research, Loughborough University

The Institute for Advanced Studies (IAS) launched in May 2017. Within three years we had welcomed 194 visiting fellows from 34 countries and IAS has won a place in the intellectual hearts of the colleagues across our campuses.

This workshop on Great Power Competition in the Anthropocene Arctic represented another important milestone for us. Under Caroline Kennedy-Pipe and Duncan Depledge's leadership, our interest in the Arctic has been growing at a real pace. In 2019, we hosted the Natural Environmental Research Council's National Scientific Conference on Arctic Affairs. Meanwhile, our Arctic research has been used to inform EU, NATO, and UK Government policy. The Arctic is shaping up to be a major and important area of research for us at Loughborough University.



Photo: Ray Chiasson

Introduction

Duncan Depledge
Lecturer in Geopolitics & Security,
Loughborough University

Caroline Kennedy-Pipe
Professor of International Security & International Relations,
Loughborough University

In December 2020, Loughborough University's Institute of Advanced Studies (IAS) and Politics and International Studies (POLIS) hosted a gathering of distinguished and early career scholars from International Relations and Geography. The remit was to explore the ways in which thinking "Anthropocentrically" could illuminate the unfolding great power competition in the Arctic.

Our workshop was motivated by the idea that the impacts of anthropogenic climate change and the resurgence of great power competition in the Arctic are happening in tandem. Although cautious about any simple assumption that the current round of competition in the region is being driven primarily by climate change, it is unquestionable that recent geopolitical posturing intersects with environmental transformation. Both fundamentally alter strategic and commercial calculations. Therefore, our workshop initiated a keen investigation of this intersection: our purpose was and is to inspire further research and debate into Anthropocene Geopolitics.

We also sought to support a conversation between a group of International Relations scholars and Geographers: individuals with a shared interest in Arctic geopolitics. This interdisciplinary dialogue had actually begun in July 2020, when a virtual roundtable had been hosted by the British International Studies Association (BISA) in conjunction with the BISA War Studies Working Group convened by Dr James Rogers (The University of Southern Denmark) and Dr Patrick Bury (University of Bath). Further collaboration has been based on a shared conviction, that IR and Geography need to work together if we really want to comprehend not just what a changing Arctic means for global affairs, but also the geopolitical implications of climate change writ large.

We are immensely grateful to Professor Simon Dalby (Balsillie School of International Affairs), Dr Mia Bennett (The University of Hong Kong), Dr Ingrid A. Medby (Oxford Brookes University), Dr Geoffrey Sloan (University of Reading), and Dr James Rogers (The University of Southern Denmark) for their excellent presentations and are delighted to be able to share their ideas in this report. We remain grateful to Professor Klaus Dodds (Royal Holloway, University of London) for his support moderating the workshop. We would like to acknowledge the fantastic support provided by Professor Marsha Meskimmon and the team at the IAS. Lastly, we would like to thank Professor Whitney Lackenbauer and the North American and Arctic Defence and Security Network (NAADSN) for publishing these Proceedings.

A full recording of the workshop is available on [the IAS website](#).

Part 1: Anthropocene Geopolitics and the Arctic

Simon Dalby

Professor of Geography & Environmental Studies,
Balsillie School of International Affairs

Let me start with that title, *Anthropocene Geopolitics*, because when Duncan Depledge kindly invited me to speak today, he simply posed the question, “Simon, what is Anthropocene geopolitics?” What I offer in response is not a theory of Anthropocene geopolitics but a few reflections on what happens if we juxtapose the terms “Anthropocene” and “Geopolitics.”

Starting with the most obvious point – which sometimes gets lost in this conversation – the Anthropocene is an explicitly geological term. Its origins come from a famous outburst from Paul Crutzen 20 years ago now, “We don’t live in the Holocene anymore, we live in the Anthropocene.” With the term “Anthropocene,” Crutzen was suggesting that the sheer scale of human impacts on the Earth system were such that we could no longer claim to live in the stable conditions of the last 10,000 years (the so-called “Holocene” in geological terms). Rather, a new term was needed to reflect the new conditions in which we now live: hence, Anthropocene. His outburst led to a couple of short papers, which have made the term stick.

Debate is on-going amongst geologists about the criteria for the start point of the Anthropocene and whether it is an epoch or era, but I’ll leave that aside. What matters is that the term is now being widely used to draw our focus explicitly to the Anthropos—that’s us—as a geological-scale agent. The sheer scale of what has been transpiring forces us to look at the origins of this new entity – or series of entities – which gives us a new geological epoch. Of course, this means we need to look at our economic systems: what we are producing, quite literally, what we as humanity are making. Or, to be more precise, the industrial carbon fueled powered part of what humanity is making. “30 trillion tonnes of stuff” is one of the lines that is going around in terms of the new materials that we have created from the biosphere. We are making the future quite literally in all sorts of dramatic ways: producing, building, and changing around ecosystems.

Indeed, this is the crucial component in the formulation of the Anthropocene.

The guts of it – I think it is worth reminding ourselves – is that combustion is our biggest problem. We are burning stuff in extraordinary amounts. This, of course, relates to critical geography themes where “firepower” was much of the focus in 20th Century considerations: bigger guns, faster ships, and so on. In other words, the ability to bring munitions to bear using, please note, combustion to do it. But far more important now is combustion in terms of powering our economies and our transport systems. 80% of humanity’s energy use is from fossil fuels. We are literally turning rocks into air at prodigious rates – and that is the crucial geological function at the heart of all the changes that we are encountering under the Anthropocene.

Traditional studies, which were much reviled and much complained about in 20th Century geopolitics, often reverted to ideas of environmental determinism; that certain environments gave you certain kinds of societies with certain kinds of attributes. Of course, this determinism involved nasty colonial and racist traits. But most late 20th Century thinkers simply abandoned the notion that particular environments necessarily gave rise to particular modes of conduct or particular types of societies. Clearly now, exactly the reverse is happening: rather than climates deciding the kinds of societies we live in, our societies are now determining what the future climate is going to look like. Quite literally we are deciding the future configuration of the planet and that is the crucial point for climatological considerations relating to geopolitics. Our destiny is how we shape geography. That is the significance of the Anthropocene for understanding what is going on.

We need to add into this the fact that various other conceptual considerations – like modernity’s insistence on separating nature and culture, human and environment – are no longer useful. These binaries have certainly structured much of the modern discourse on geopolitics, but they no longer make much sense because we have clearly scrambled them. So, in that sense – if you will forgive the stretched terminology – we are post-modern. We are beyond those categorical distinctions and indeed, Bruno Latour insists that we need to think in disciplinary terms outside of the boxes created in the 19th and 20th Century. Hence his idea of “geostory”, where we link history and geology together rather than treat them as separate scientific investigations. I think that geostory is a useful terminological innovation to flag that for all of us.

More recently, we have been reminded of the vulnerabilities and the interconnections that are clearly obvious points for investigation in a world in which modern notions do not work anymore. The COVID-19 pandemic has suggested all sorts of vulnerabilities for human health, but it also has suggested all sorts of vulnerabilities for how we are interconnected ecologically and economically—the disruption of habitats, or so-called wild spaces, and the jumping of zoonotic disease from animals to humans, gives us all sorts of potential pandemics which we have avoided, with Ebola being the most obvious one. So, we need to stop and think about farming and livestock. Just think of the extraordinary news from Denmark recently about mink farming (where 15 million mink were farmed) and how that has suddenly become a reservoir for a mutated COVID-19 virus. We need to better understand our interconnections in terms of industrial farming in all sorts of complicated ways because, of course, farming is now producing far and away the largest animal biomass on the planet. The percentage of wild animals is estimated at 3%. The rest is either us or our farm animals. In short, traditional notions of wildlife do not work anymore.

Neither do traditional notions of planning in terms of such things as bridge building or other practical architecture. The one in 100-year flood is no longer a reliable indicator of the likely conditions for future structures. We are living in a world of non-stationarity: “stationarity” being the broad understanding of likely future conditions based on past precedent. And that too is beginning to give way as architects, engineers, and builders need to stop and think about the future circumstances for which they are planning to construct all sorts of things.

Klaus Dodds will remind us that geopolitics is also about how context is represented. The point is that the Anthropocene means we need to stop and think about context at the largest scale in new and different ways, considering the last few points I have just made. We are all struggling to do that. I make no claims to have worked out how to do it well. But it becomes clear that we need to think about the representation of contexts because the discreet sovereign boxes of governance that humanity has generated—particularly since the middle of the 20th Century with the decolonization of the planet—are supposed to mean that there is a place for everybody, and everybody has a place. Those assumptions are a poor way of grappling with the context with which we now live—interconnectedly, ecologically, and economically ever more so than in the past. When imagining the connections, we must reimagine our consumption as leading to environmental change in all sorts of direct ways, but also, crucially,

indirectly, simply because of the rapidly mounting carbon dioxide fraction in the atmosphere, which continues in its upward trend, dramatically so in the last few years.

In terms of implications of what follows from thinking about the Anthropocene, my standard argument is that we need to move from traditional notions of environmental protection to thinking about ecological production—quite literally, what ecosystems are we assembling—and stop thinking just about protecting environments because most environments have already been dramatically disrupted. There are all sorts of implications for what we make, but in terms of ecosystems—what we plant where, which species we move into what locations, where we dam rivers—all of those things are changing, quite dramatically, the practical ecological contexts on the small scale, but also, inevitably, on the bigger scale too. Not least in terms of how we consider things like the slogan of “keep it in the ground,” fossil fuel production must be ramped down, solar panels and windmills need to be ramped up.

Another crucial point that relates directly to the transition from fossil fuels to new energy sources—after all we are going to need new sources of energy to keep 7 billion of us alive in an increasingly urban planet—is that we now face a situation where time matters hugely. What we do in the next decade or two makes a huge difference for the long-term configuration of the planet. That is fundamentally different from traditional geopolitical thinking, where the assumption was, “well, the mountains are going to stay there.” Well, yes, the mountains may only move a centimetre or two a year, but an awful lot of other things related to climate are going to change very dramatically depending on how rapidly we manage to get off fossil fuels. Greta Thunberg understands that. If you were born in this century, you intuitively understand that. But 20th Century vintage humans seem to be having a terribly difficult time getting their heads around that point. I think that matters hugely for the Arctic and everywhere else.

Security can no longer be about more firepower. It has to be about dramatically reducing firepower if we are going to get into a situation where the climatological and other ecological circumstances are something akin to the Holocene conditions, which have made civilizations, our history for the last thousands of years. More firepower is exactly the problem. Combustion is coming back to bite us. It has made us powerful, it has generated all sorts of geopolitical rivalries, but if we are going to survive in the long run as a species, we have to think about rapidly reducing the use of fire, the use of

combustion. Firepower is now the problem. It doesn't provide security as we've traditionally understood it. It requires us to rethink many things.

This is really, in the end, a global problem. Yes, you can make the argument that many societies have faced calamities. Look at what was done to the Indigenous peoples in North America with the expansion of European power a few centuries back. Some of it continues to go on. But at the global scale, we are now facing transformations that endanger "civilization" at the global scale. The term "existential risk" is being kicked around and it's actually advisable because present projections are heading us into a "hot house world," to use the Stockholm folks' terminology. Not of a new stable climate, which is a bit different from the one we have known in the past, but dramatic, continued, ongoing disruptions for the foreseeable generations to come unless we curtail our use of firepower.

Of course, the crucial point as far as the Arctic is concerned is that the changes are reaching it fastest. We are seeing a preview of the future by Arctic amplification. Just look at the headlines in late 2020 in terms of the right-off-the-charts scales of temperatures in Siberia and the lateness of the forming of Arctic ice. This is a wakeup call for what is coming. Is keeping the world at an average under 2° enough, never mind 1.5°? Clearly geographers will remind you that it is an average across the whole planet if we get there, but it has dramatic regional consequences which will be very different from those average figures and clearly the North is the wakeup call. Can we see great power competition to actually dramatically reduce firepower? Perhaps the Arctic might be the crucial geographical arena which makes that a pressing political priority. So far it has not, but the significance of the Arctic lies precisely there and requires us to rethink security as something other than using firepower to dominate particular parts of the planet because that has caused us to live in what is now called the Anthropocene.

Mia Bennett

**Assistant Professor, Department of Geography,
University of Hong Kong**

In my brief remarks, I will focus on the Arctic and discuss some of the opportunities and limits around Anthropocene thinking. I will also conceptualize some future directions in which we could push this research.

Humans have long sought to represent the world around them in two dimensions, whether in the form of maps painted on the walls of the Lascaux Caves 12,000 years ago or in the latest maps of the melting Arctic. However, these visual representations have tended to flatten our 3D-planet. In line with a two-dimensional, flattened view of Earth, geopolitics has conventionally been defined as how geographical factors influence and structure international relations. Yet representing the Earth in two dimensions—and particularly its political divisions—presents two major limitations.

First, influential geographical factors tend to be imagined as mountains, plains, rivers, oceans – physical features found on the “surface” of the Earth. Second, geopolitics, both as examined by academics and specialists, and the media, has largely privileged relations between sovereign nation-states. The concept of the Anthropocene, however – defined as the era in which humans are the single most important geological force shaping the planet – urges reckoning with more volumetric geographical factors that stretch from deep below the surface to far above it, and with actors that transcend nation-states. Thus, two major benefits of thinking with the Anthropocene are that it facilitates critique of more-than-surface level phenomena and attention to more than just nation-states.

First, considering more-than-surface level phenomena involves paying attention to geologically dynamic factors, like earthly features that are getting crustier, icier, and wetter. Anthropocene scholarship embraces more material and volumetric features, whether bathymetry, shifting sea ice, or oil and gas deposits.

Second, to grapple with the politics of fast-changing environments across all their dimensions, we need new projections, visualizations, and theories. Simon Dalby and other geographers like Nigel Clark have argued that by entering the Anthropocene, society has left the era of geopolitics for the era of geological politics. If power relations in the era of geopolitics involved control over terrain, then power relations in the era of geologic

politics rely upon control over strata, from under the Earth's surface to up into the atmosphere.

In the twentieth century, geopolitical power depended on the ability to project control over terrain, which was transformed into the political technology of "territory," as Stuart Elden has explained. This control could be obtained through a variety of means such as exercising military power over land, sea, or air, building up "infrastructural power," as Michael Mann has explained, or by gaining control over distant territories.

Yet, in the era of geologic politics, it is control over the strata which helps to instrumentalize territory in a more vertical, volumetric sense, as Simon Dalby has shown. This transforms three-dimensional geology, rather than two-dimensional territory, into a new object of political manipulation and control.

Applying an Anthropocene lens to thinking about geopolitics and the Arctic also invites attention to more than just nation-states. It encourages serious consideration of and meaningful engagement with the transboundary rightsholders and stakeholders who are increasingly vital to decision-making in the region, from Indigenous Peoples to multilateral organizations like the Arctic Council, and multinational corporations like Shell. An Anthropocene lens also forces us to look outside the region to consider extraterritorial actors, such as the state-owned China Ocean Shipping Company, which has carried out test voyages in the Northern Sea Route.

So, rather than just thinking about Anthropocene geopolitics *and* the Arctic, we can actually think of Anthropocene geopolitics *through* the Arctic – in other words, how transformations and processes ongoing in the Arctic may signal eventual changes to the rest of the world. Indeed, as a region warming two or three times as fast as the global average, the Arctic has long been a bellwether for climate change. Yet the Arctic is a bellwether for global politics, too, from the empowerment and self-determination of Indigenous Peoples, to the rise of Asia in development and finance, to a move towards abandoning oil and gas in favor of renewable energy.

Particularly in the Arctic, one obvious impact of the Anthropocene is melting sea ice. Climate change, a phenomenon largely driven by anthropogenic emissions of carbon dioxide originating from the burning of fossil fuels, is raising the possibility that the Arctic may have a "blue ocean event" – the loss of all its summertime sea ice – as soon as the 2030s. While this massive environmental shift opens new commercial opportunities, it will also profoundly impact the ways in which geopolitical power is

displayed, manifested, and symbolized in the Arctic. For instance, one question we might ask is: Will countries still seek to build icebreakers if the technology seems to be growing obsolete? What might they instead seek to do to demonstrate prowess and mastery of the environment, which has long been so crucial to exercising sovereignty? Rather than smashing through and “conquering” the ice, so to speak, could “restoring ice” and geoengineering technologies become new manifestations of geopolitical and indeed, geological power? Perhaps here, we could conceptualize a shift from Simon Dalby’s firepower to icepower.

Already, in 2015, China’s state-sponsored National Key Basic Research Program established a coordinated team of scientists researching geoengineering, with their work specifically focused on China and the Arctic. Yet it is not just sovereign nations that are considering mind-boggling experiments with Planet Earth. An architectural team based in Indonesia conceptualized how submarines could produce small icebergs. Indigenous Peoples are also exploring geoengineering solutions. In 2012, the First Nations Village of Old Massett on the Haida Gwaii islands in British Columbia cooperated with a start-up in San Francisco to try to restore salmon stocks by dumping iron sulphate at sea. In short, there are many actors seeking to transform the environment in different ways.

This diverse array of actors involved in the business of changing Planet Earth, however, can get lost with the term “Anthropocene.” One of the concept’s major limits is that, by attributing change to humans at large, it obscures more specific geographical forces. Jason Moore accuses the concept of “shallow historicization” and offers the more precise “Capitalocene” as an alternative. Donna Haraway instead suggests “Cthulucene” to get at the messy entanglement of humans with one another and with nature, arguing, “We have never been individuals... We are all lichens now.” At any rate, for all the new lines of thinking that the Anthropocene provokes, in its universalizing and totalizing aesthetics, it hides how specific forces – industrialized nations, oil and gas majors, and now more recently China and other Asian countries – bear responsibility for carbon dioxide emissions. While the Anthropocene, as a heuristic device, may veil national culpability, we still need to consider how activities bounded within the two-dimensional borders have set in motion problems that now require responses that transcend these very lines on the map. Even if responsibility for the Anthropocene is not universally borne, since we are all living in it, we must find ways to work across the borders that still separate us. Anthropocene thinking can be depressing and grim. Yet it can also remind

us, as Haraway notes, that as we are all in this together, we must find a way out of it together, too.

As for future directions for thinking about Anthropocene geopolitics through the case study of the Arctic, I would like to highlight three directions in which we can push, building to varying degrees on work that is already being pursued: 1) technologies and materialities; 2) imaginaries; and 3) identities.

First, concerning technologies and materialities: Rigorous pursuit of Anthropocene geopolitics would combine both geography – the study of “earth writing,” or how people represent, imagine, and relate to the planet in pursuit of diverse objectives – with geology, or the study of the Earth itself and its physical and earthly realities, from the molten core to the frigid realm of outer space. Anthropocene research is already going in this direction thanks to the flowering of interdisciplinary and transdisciplinary conversations, projects, and conferences. Promisingly, there is also increasing openness by both human and physical geographers to understand humankind’s physical impacts on the planet, and how those effect how we imagine and represent the planet.

Nigel Clark, for instance, traces how, since the Stone Age, when humans first discovered combustion, they have used fire to transform what he calls “earthy materials” at an increasingly larger scale. Building on this work, we might think about how fire, and fossil fuel combustion in particular, have transformed entire regions such as the Arctic. This leads me back to my earlier suggestion to pursue inquiries into both the technologies and imaginaries of geoengineering. In this vein, we might also consider the relationship between politics and the technologies with which humans have manipulated the planet. It’s worth underscoring that two of the defining markers for the geological stages sub-setting the previous geological epoch, the Holocene, are ice cores. In 5,000 years, it is possible that all the world’s ice could melt away. In such a catastrophic event, sea level would rise 70 meters, submerging the world’s coastal cities. We would also lose a repository of geological data integral to our ability to reconstruct past climates – not to mention the foundation of so many ways of life practiced for tens of thousands of years in the cryosphere.

That brings me to the second direction in which we could investigate geopolitics in the Anthropocene, which regards imaginaries of the epoch both in and beyond the Arctic. A recent study published in the journal *Earth System Governance* by a team of Swedish authors identified three main Anthropocene discourses in the field of international relations vis-à-vis the

“new environmental realities” facing global politics: the endangered world, entangled world, and extractivist world. While all of these “worlds” exist, they are still largely represented from the outside by people well-protected against climate change and the risks of the Anthropocene. To diversify representations of the Anthropocene and especially the Arctic, we should interrogate how both the epoch and region are imagined by those most affected by climate change. Frankly speaking, I might ask whether the Anthropocene even holds any meaning to people whose lives have long been enfolded within the planet’s earthly, icy, and watery dimensions.

The third and final research direction that I would encourage, involves reflecting upon the identities that various agents assert, and which are placed on them in the Anthropocene. While certain countries are geological agents, such as industrialized nations like the US and China, they present themselves as geological victims. China, for instance, in its 2018 Arctic Policy, expresses, “The natural conditions of the Arctic and their changes have a direct impact on China’s climate system and ecological environment, and, in turn, on its economic interests in agriculture, forestry, fishery, marine industry, and other sectors.” The country is less willing to admit that its contributions to greenhouse gases are directly impacting the Arctic. In contrast, the media often represents places and people in the Arctic as victims. Yet for all the drama and angst of the Anthropocene, they might also want stories of their resilience, adaptability, and empowerment told as well. Reimagining our narratives might compel not only examinations of great power politics in the Arctic, but great adaptations, too.

Ingrid A. Medby
Senior Lecturer in Political Geography,
Oxford Brookes University

In my work, I have been particularly interested in Arctic identities, and I have wanted to draw attention to people – and specifically people enacting political practice, or the *performers* of “performative” politics in the Arctic. The aim has been to enrich our analyses of geopolitics and practices of power by focusing on practitioners and on the ongoing making and un-making of geopolitical relations.

Today, I will go a bit further and suggest that we need to fundamentally rethink some of our concepts of both geopolitics (or great power competition), and of the Anthropocene.

Let us start with the latter: There are reasons both to like and dislike the term “Anthropocene.” It might be a beautiful but potentially elitist term. And like “the Arctic,” it is a term of Greek origin; it is to Arctic residents an externally imposed term that might not necessarily resonate beyond the so-called “Ivory Tower.” For example, I teach the Anthropocene and Anthropocene politics, and my students read some of Simon Dalby’s work. Students tend to enjoy it but would often not be able to define the Anthropocene before we start – it is not a term that we necessarily use in everyday speech. They are often much more confident talking about climate change or environmental issues. This is significant because, if the aim is to shift ways of thinking and engaging, then using terms that resonate is of crucial importance. Therefore, we might worry that the term becomes, or at least *can* become, potentially an intellectual exercise: It is interesting to think about, but it does not necessarily register as important in the day-to-day. Most importantly, the risk is that it can alienate those whose lived experiences we are interested in when we talk about the Arctic and Arctic geopolitics. However, perhaps these are unfounded concerns. The counter argument, which has also been articulated very well in Simon Dalby’s work, is that the Anthropocene and its alien newness could force us to look from a different angle – be that as academics or as engaged citizens.

Staying with this tension, it is worth remembering that the Anthropocene is a geological epoch. And as Kathryn Yusoff has recently articulated powerfully, geology too is a discipline intrinsically entangled with colonialism, racism, and slavery. We cannot move forward without reckoning with this past either: What are the categorizations employed? What are the erasures active in the Anthropocene today? On that note, and

imperative in the Arctic context, Indigenous authors such as, for example, Zoe Todd and Kyle Whyte, have highlighted how the concept of the Anthropocene itself can be a new form of colonization, of obstruction of knowledges, and of universalizing across difference. Whyte calls for a non-Western and non-white approach to time, whereby we come to the conversation with past, present, and futures that are all co-constituted, that are all ongoing. And Zoe Todd and Anja Kanngieser have recently written on the importance of staying local, allowing for diversity and difference beyond human divides. This resonates with the idea of geostories as well. However universally “anthropic” the term might seem, there is a need to stay with the local and the relational to affect the necessary change that are discussed here. The Anthropocene is *not* universal – neither in its causes nor its affect. In short, we need to be careful in how we apply the Anthropocene: What does it all mean for geopolitics – and specifically for the Arctic?

As mentioned, to engage fully with anthropogenic climate change as well as geopolitical relations, we arguably need to acknowledge the diverse people and peoples involved at all levels, recognizing political agency beyond the high echelons of government; and we need to work towards inclusion for a wider set of voices in so-called geopolitics. In the context of the Anthropocene, we should broaden this to say that we also need to pay attention to and recognize the agency of the non- or more-than-human. Klaus Dodds has written beautifully on the materiality of ice, for example. There is no doubt that this lens is necessary in Arctic geopolitics today, and that it always has been. What would it mean to include, for example, ice as an actor in geopolitics? What if we centre the fact that our geopolitics is part of a more-than-human world, always in relation to other beings and other elements as well. This might go beyond how we *usually* think of geopolitics, but I am inspired by authors such as Anna Tsing and Donna Haraway to propose an understanding of geopolitics that is multispecies and world-making. Can we think of an Arctic geopolitics where animals, too, *act*? Consider for example Hvaldimir, the so-called Russian spy whale; or snow crabs who refuse their sedentary categorization and who challenge our conventions on International Law of the Sea in the Arctic; or indeed oil, the remains of ancient creatures who once roamed the earth and seas.

Toal and Agnew famously defined critical geopolitics in 1992 as the work to illuminate how politics is actively *spatialized*. We can think of this today too, as how geopolitics is a mode of world-making: What world *is* the Arctic, and how is it made such through various practices? These are

conceptual provocations that invite further discussion but let me end with a concrete example.

In my own research I have been interested in how state personnel relate to the Arctic region, including how they define and understand it as a political space. What that research has shown is that the so-called state is made up of practices that come from embodied subjects, whose emotions, experiences, hopes, fears, all interweave at once. I am currently looking at the peace-building initiative, “The Barents Cooperation,” launched in the wake of the Cold War in 1993 in order to improve Russian-Nordic relations. The initiative does so through “people-to-people” contact: through grassroots level activities, including sports tournaments, choir exchanges, and similar. However, increasingly this peace-building project is also about environmental questions – on shared environments, but also shared challenges. On the prosaic level, issues such as waste recycling bring people together from across borders who would not otherwise have met. These are relations that later inform foreign policy too – but importantly, relations that are not just between two individuals, but between spaces, environments, and communities all at once.

So, in the end, the Anthropocene – and climate change – will profoundly and dramatically change the Arctic, and with that, geopolitical relations in the region. However, we cannot approach those changes with the same old analytical lenses we have used to date. If anything, these have proven inadequate time and time again. I would argue that we need to include a wider array of actors, human *and* non-human, a wider set of spaces and relations, to not only understand the present but also move towards a future we want. Because, fundamentally, as analysts and academics we have a role to play in the Arctic discourses that develop: What and *who* is the Arctic; who is heard and not; and what do we want it to be. If we continue the narrative of “great power competition”, do we not risk overseeing other going-ons in the region? What does *not* fit into that frame, the relations and developments that have not-yet been theorised by IR scholars? I think we can – and will and should – discuss specific political developments and risks in the region, but let us do so in a critical spirit: The Anthropocene requires us to think again, anew.



DND photo FA2013-5100-02

Part 2: Arctic Great Power Politics in the Anthropocene

Geoffrey Sloan

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For my talk, I ask you to imagine a jigsaw puzzle with 5 parts to it. For the first part, I'll talk about Halford J. Mackinder's background and influences. I'm then going to talk about the Arctic in classical geopolitics, drawing mainly from Mackinder's work, *Democratic Ideals and Reality*, which he wrote in 1919. Then, I will talk about an update on the resources that have been discovered in the Arctic. Fourthly, I'm going to talk about China and China's maritime power in the Arctic Ocean. Finally, I'm going to share some of the interest coming from the British Ministry of Defence and particularly its Chief of Defence staff seminars, which have been running since 2018 through to present.

I'll start by talking about Mackinder. Many people, I suspect, are already familiar with Mackinder. He was that rare beast in British public life: a polymath. His ideas, I would suggest, were a product of careers that were forged both within and beyond the academy. He set up the School of Geography at Oxford in 1889. He also was responsible for setting up the University College of Reading, of course, which becomes University of Reading in 1926. He was the second director of the London School of Economics where he established a course on behalf of the War Office for army logistics officers that ran from 1909 to 1932. In fact, those army officers represented the first full-time students at the LSE.

He also contributed to public service and briefly became an explorer. He led the first European expedition to Mount Kenya in 1899. Lord Curzon the British Foreign Secretary appointed him as British High Commissioner to South Russia in 1919. He was elected to the House of Commons as a Scottish Unionist MP for a constituency for Glasgow in 1910-1922. He was also a member of the Privy Council and was a member of the Royal Commission on Food Prices. I think he recognized himself that his career had not been one of linear progression. In the 1930s, he said, "There's another kind of career, which I will describe as erratic, and such a career has

been mine, a long succession of adventures. I do not admit to having been a rolling stone because I generally knew where I was going but certainly have gathered no moss.” I think of Mackinder’s experiences in higher education, military education, politics, public service, diplomacy, and policy formulation as a series of vantage points from which to view the interplay of politics, both domestic and international, with geographical realities.

Before I start talking about the Arctic in Mackinder’s writing, I would first like to remind you of three of Mackinder’s propositions (drawn mostly from his 1919 book, *Democratic Ideals and Reality*). The first one is that each century has its own geographical perspective. The second is that the geographical perspective of the 20th Century differs from all the previous centuries by more than mere extension because the outline of geographical knowledge was now complete. Finally, having attained the North Pole, as he put it, the paradox was that it was in the midst of a deep sea.

Now, for the second piece of my jigsaw: the Arctic in classical geopolitics. Mackinder stressed the importance of what he called the brigading of data. This enabled him to reason about the realities which constitute “strategical thought.” He identified three elements. First, the northern edge of the Arctic is inaccessible, as it is beset with ice except for a narrow waterline, which opens here and there briefly in summertime. Second, the three largest rivers in the world all flow, or run northward, towards this frozen coast. These rivers are de-attached for practical purposes from any system of ocean and river navigation. He also made a synthetic observation about the Arctic being connected to other adjacent regions. South of Siberia there are rivers which drain into salt lakes and have no outlet to the ocean. He pointed out that the Volga and Ural rivers flow into the Caspian Sea. He also observed how the Arctic region and its continental drainage cover half of Asia and a quarter of Europe.

Mackinder’s key point was that these regions of Arctic and continental drainage form a great continuous area in the centre of the Eurasian continent. This area, which extends from Siberia to the Arctic coasts, has been inaccessible from any ocean. The geopolitical significance is that these areas have not been historically accessible to Western navies. He later updated this with the prediction that it would be opened up by railways and airplane routes. He named it the “Heartland.”

Mackinder argued that the areas north, centre, and west of the Heartland form a plain. He called this the Great Lowlands. It constituted a gateway from Siberia to Europe. In terms of brigading geographical data to produce strategic thought, Mackinder argued that the inaccessible area of

the Arctic is masked by the Great Lowlands. Rivers flow both North into the Arctic, and South into the great lakes of the Lowlands. The Great Lowlands end at the Iranian Uplands. In short, the Arctic can best be understood geopolitically as part of the larger geographical configuration of the Heartland. This was qualified by Mackinder's assertion that no practical idea can be static. Mackinder's insight in terms thinking about the Arctic and its strategic importance in the past and the future was as follows: "we must come to it with a momentum of thought, either from our own experience or from history."

Having talked about Mackinder's ideas, it is important to update them. One of the factors prompting increasing international importance of the Arctic is, of course, availability of energy resources, which have become increasingly accessible due to warming temperatures and advances in extraction technology. I will not quote all of this, but in 2008 the U.S. Geological Survey estimated that the Arctic contained 90 billion barrels of oil, 1,669 trillion cubic feet of natural gas, and 44 billion barrels of natural gas liquids with 84% of these occurring in offshore areas. This is a sizeable number of natural resources. The following year, in 2009, the same survey assessed that the petroleum natural gas resources for the Barents Sea was estimated to contain 76 billion barrels of oil, including approximately 11 billion barrels of crude oil, 308 trillion cubic feet of natural gas, and 2 billion barrels of natural gas liquids. These enormous deposits of natural resources were simply undiscovered when Mackinder was writing about the Arctic in 1904 and in 1919.

The fourth part of my jigsaw is China. There are a lot of countries interested in the Arctic, but I've chosen China because I think what we are seeing emerge in international relations is the beginning of a process by which we are going to see a "Sino-centric" world order emerging. Although not geographically contiguous to the Arctic Ocean, China's increasing economic influence and military power make the Arctic an area of interest to Asia. It is interesting that contemporary Chinese policy makers refer to China as a "near-Arctic state." They describe the Arctic's natural resources as the common heritage of mankind. They joined the Arctic Council in 2013 as an observer state.

While there are several Chinese Arctic analysts that urge China to take a cooperative role, there are others who believe that Beijing should be more assertive in its Arctic posture. This latter group would argue, of course, that the Arctic is an alternative sea route to the Malacca Strait, which they contend the U.S., and its allies, could use to choke off access to Persian Gulf

oil. They also note that the Arctic is a crossroads between EU and the U.S. and point to the U.S. having a Ballistic Missile Defence capability in Alaska which could be used to constrain China. One argument put forward by one of the directing staff of the Liberation Army Naval War College is that the melting ice reduces the distance between regional great powers while increasing the Arctic's strategic importance. It is also interesting to note that in October 2015, the Vice Foreign Minister of the People's Republic of China described China as a near-Arctic state and China published its Arctic Public Policy paper in January 2018, highlighting that while states outside the Arctic region do not have territorial sovereignty, they have rights concerning exploration, navigation, and fishing, etc. in the Arctic Ocean.

The last piece of the jigsaw is the British Ministry of Defence. In 2018, the Chief of Defence Staff established a Strategy Forum posing the question: does the UK defence need an Arctic strategy? What is interesting is that, in 2019, they had another strategy forum examining the China challenge. Most interesting of all is that, in 2020, there were not one but two strategy forums which have a specific focus on climate change. One of the things explored was the implications of climate change for UK defence and security policy.

In conclusion, I would argue that the classical geopolitical perspective that Mackinder gave with respect to the Arctic needs to be seen in a wider context. It needs to be related to the areas he called the Great Lowlands and the Iranian Uplands. He was the first to understand that transport and weapons technology changes the strategic relevance of geographical locations. As General Sir Rupert Smith recently stated: "Geostrategy tends to bleed into geopolitics." One thing Mackinder did not have to address though, is the issue of climate change. Yet what endures was his capacity to give judgement in practical conduct.

James Rogers
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This discussion about the Anthropocene has got me thinking about the differences between perceptions of the “three dimensional strata” and broader geopolitical considerations. There was a great question about how remote technologies fit into these conceptualisations of our world, and how they could help humans traverse so called “distant and remote inhospitable places.” My remarks fit nicely in the middle of this discussion and builds on Geoffrey Sloan’s great talk, which touched on how technologies evolve.

Indeed, we’ve reached a point in history that Mackinder may have foreseen. I’m going to talk about how remote technologies, especially remote weapons technologies, alongside new military technologies and military hardware and infrastructure, are being used in combination to reinforce sovereign territorial claims, but also to patrol remote territories in the Arctic. First though, I will explain why I think the Arctic is important (especially, why it is important to Russia).

First, we most often talk about the Arctic as a single region, yet of course, there are many different “Arctics.” Whereas the Northwest Passage is likely to remain ice-heavy for the next generation, the Northern Sea Route (NSR) is quickly “opening up for business.” This is important because the NSR can cut time and distance for Asia-Europe trade by around 2 weeks. By August 2018, there had already been an 81% increase in traffic on the NSR, compared to the same period in 2017. In 2019, there was a further 63% increase compared to 2018. The “May Decrees of the President” included an ambitious plan to reach “80 million tons of goods in year 2024.”

Even in 2020, despite COVID and global restrictions, shipping along the NSR has increased, albeit by a modest 2.9%, approximately. Shipments include liquid natural gas (LNG) and oil, as well as goods from Asia to Europe (e.g. Indian fine coal exports, South Korean electronics, Russian fish, and Chinese exports of computer and mobile tech). The NSR is therefore starting to become a vital bloodline for an economically struggling Russia, which can charge tolls, icebreaker support fees, and extract and export natural resources to markets that need them.

With parts of the Arctic opening, Russia is also becoming increasingly concerned about security (in recently released Russian strategy documents, national security in the Arctic was mentioned at least 31 times) and investing in a range of military technologies. So, how is Russia looking to fulfil its national security aims and protect its interests in the Arctic?

One of the first steps towards securing the region around the NSR, in terms of new technology, was Putin's pet project of establishing an Arctic Drone Squadron in 2014. The workhorse of this project is the Orlan 10, stationed from Nenets in the West to the Chukotka (Anadyr) in the far East. The base in Chukotka is 626km from St. Lawrence Island, U.S. Orlan 10s are unarmed surveillance drones that provide situational awareness across the NSR. They can fly 140km from the ground control station when linked up and 600km+ when flown in an automated fashion. These drones play a prominent role in the broader Russian drone fleet, where they have achieved notoriety for working in multi-drone deployments over Ukraine to send propaganda messages and jamming signals to Ukrainian troops and equipment. In the Arctic, they can be used to monitor the combat readiness of remote bases and hardware to avoid humans having to be present to check on remote bases. They can also aid in communication to help link up bases over a wider area or provide surveillance of unwanted guests.

The development of the so-called "Frigate Drone" is a far more substantial system. It has a vertical take-off capacity with an apparent 1700kg payload (in tests), 8000m altitude, 10-hour flight time, 19m wingspan. These could be important for resupply, but also potentially ideal for military corvette and Icebreaker landing, replacing vulnerable manned military helicopters. This is again about replacing humans in the remotest parts of the Arctic and the list of vertical take-off systems being designed and tested for use off naval vessels in the far north continues to expand (see the ZX1 and MAKS19, for example).

Then we have the largest of the drones that Russia is producing, the Ohotnik, which is stated as being a long-range combat UAV. This drone, reported to weigh 20-ton was recently tested in -12°C with more "Arctic conditioning" testing speculated to be on the way. As an armed, Medium Altitude Long Endurance drone, it can be used for "protecting the state border in hard-to-access and remote areas and also in places of active illegal activity." Taking this and other Russian drone developments together, provides us with a useful lens through which to look and understand what Russia's priorities are in terms of military technologies and national security in the Arctic.

This snapshot of drone technology in the Arctic links up well with the next generation of Icebreakers and military naval ships in the region. The Project 22220 was set to be commissioned by 2021 (when introduced in 2017), yet this has been setback due to sanctions put on Russia after the Ukraine Crisis. Nevertheless, the Russian flagship icebreaker project, Arktika, has finished undergoing sea trials and is now in full service. It is 173m long, nuclear powered, and able to break through 2.8m-thick ice. There are 6 in total projected to be active by 2025. This is important to note, as the success of this project supports Putin's plans to make the NSR a viable sea route all year

round. Even though regions of the Arctic are getting warmer, there will still be volatile weather patterns where unpredictable ice heavy periods will emerge in addition to light ice or virtually ice-free periods. So, icebreakers are still important.

This links into Project 10510, which is the Next Generation icebreaker. This is bigger at 205m length and projected to be able to break through 4.8m-thick ice. The plan is for these to be out by 2027-2033. The important part of this is that, like a lot of recently laid down Russian systems, these will have an organic air-arm capability to them, which means you will be able to have your vertical drone systems landing on and off them in a “lily pad” fashion.

Finally, Project 23550, which is an ice class patrol ship. This multipurpose vessel is conceived as an all-in-one Navy warship, icebreaker, tugboat, and military vessel, measuring 361ft long. It reportedly carries 8 Kalibr-NK cruise missiles. It is projected that the Russian Northern Fleet will have 2 of these by 2023. If these are ship-to-ship range cruise missiles they have a range of 300-400km. If they are ship-to-land they potentially have anything up to 1,000km range.

Accompanying all of this are the new “autonomous Arctic military bases” that are dotted across from the NSR on Frans Josef Land, Kotelny Island, etc. In my work, I argue that these bases provide a link-up between the Arctic drone bases, the icebreakers, and military vessels to provide cover for the NSR. The Arctic Clover (Kotelny Island, Far East, 2015) has coastal missile system, domed radar station, and helipads. The Arctic Trifol (Alexandra Land, Western Central, 2017) can accommodate 200+ troops for 18-months, with the added capacity of advanced anti-ship missile systems with a 200km range and a new 2,500m runway. It is possible that large fixed-wing drones, like the Ohotnik, or Su-34 crewed military aircraft, could now take off from this site if required, providing defence and offensive air capability. Russia also has the Tiksi Base, started in 2018, Mainland East. Here it was stated by the Russian Northern Fleet Commander Admiral Nikolay Yevmenov that, “[w]e plan to develop an anti-aircraft defence unit here in Tiksi. It will become part of the 45th army. Radio and anti-aircraft missile units must create a protective dome to defend the airspace above the Russian Arctic.”

An additional four bases are at various stages of construction or upgrades. 470+ pieces of Arctic infrastructure have been built since 2012 alone. According to the Russian defence minister Sergei Shoigu, 59% of the country’s modern nuclear and missile arsenal will be located in the region by 2020. In November 2020, Tsirkon hypersonic anti-ship missiles were tested by the Northern Fleet off the Kola Peninsula, which have a 1000km range.

So, what can we conclude from this? From tracking the development and deployment of emerging military technologies and bases, we can begin to

understand the character of the security environment around the NSR and the importance of the Arctic to Russia. Russia has, in essence, created a virtual net over its Arctic operations. This includes the development and testing of various short to medium range missile capabilities, regional surveillance, electronic warfare, radar, and airpower assets all linked by new icebreakers and various high-tech armed and unarmed drones. Of course, many of these also have their civil applications. Search and Rescue is important in the region, and as the Russians have stated, law enforcement and climate change monitoring are important there as well. However, there are important implications of this substantial transformation of the Russian Arctic for the U.S. and NATO allies.

When I first started working on this back in 2012, the increase in state tensions was something that would have rarely been recognized in Arctic discussions, but there was a change in our focus under the Trump administration (2016-2020), especially after comments by Secretary of State Mike Pompeo in 2019:

We're entering a new age of strategic engagement in the Arctic... complete with new threats to the Arctic and its real estate, and to all of our interest in that region... we are fortifying America's security and diplomatic presence in the area... hosting military exercises, strengthening our force presence, rebuilding our icebreaker fleet, expanding Coast Guard funding, and creating a new senior military post for Arctic Affairs inside of our own military.

At this time (December 2020), there is no definitive indication of Biden's plans, but from my conversations with some of the transition team and those who worked on his campaign, it looks like Biden will not fully back away from this more hardline approach. Instead, it will be a mix of hard security and climate security which will form parts of Biden's agenda. Arctic drones will play a key part in this response for the U.S. and its allies.

We can see this in some of the ways the U.S. and NATO allies have responded to Russia's transformation of the NSR. The U.S. Office of Naval Research (ONR) is managing what is officially called the Arctic Mobile Observing System (AMOS). This will enable 2-way communications, under-ice mobile vehicle navigation, and extended-duration autonomy in the complex Arctic environment. The new U.S. Air Force Arctic Strategy stated that the "Arctic is among the most strategically significant regions of the world today" and as such they have been increasing Global Hawk Flights from Alaska. On August 11, 2020, for instance, a Russian MiG-31s was allegedly intercepted by a Global Hawk over Arctic Waters.

The Canadian Department of National Defence confirmed that drones "will routinely be used for surveillance and reconnaissance of Canadian

Maritime approaches and in the Arctic” by 2025. This will likely be in the form of Sky Guardian (or older variants), which will also be used by the British to support NATO partners in the region. Canada has wanted drones for a while and previously attempted to buy a German drone a few years ago.

Smaller Arctic state drone use includes the Icelandic Hermes 900 in the Icelandic East with a 1000m range. This is an Israeli drone supplied by the European Maritime Safety Agency and is for search and rescue primarily. However, it could be used to patrol parts of the GIUK Gap, and it is no coincidence this drone has been deployed off the east coast of Iceland. In addition, the Danish Minister of Defence, Trine Bramsen, has announced that the country will invest 1.5 billion DKK (245 million USD) in strengthening its defense capabilities in the Arctic, including through satellite and military drone systems.

All in all, Russia has pioneered military drone use in the Arctic. This, it appears, has been noted by rival Arctic states and their regional allies who are acquiring and deploying their own military drone systems. The increased state interest in Arctic drones is not surprising. As I laid out at the beginning, drones are ideal systems for power projection in the “remote” and “dangerous” Arctic. The military drone was invented as replacement for vulnerable humans in hazardous places and at an elemental level, the military drone allows the transcendence of some of the geographical, geological, and meteorological dangers of projecting power in the frigid Arctic. Not only this, but with the capitals of national governments often thousands of miles away from the borders of their vast and difficult to traverse territories, drones offer a useful alternative to relying on traditional and costly ‘manned’ forms of military activity in Arctic regions.

Although this may all sound infinitely positive, there is an important discussion which needs to be engaged in about the attributes both positive and negative of drone proliferation in the Arctic and I hope today we can start a debate on this topic. Drones are not “panaceas” to the costs and risks of conflict and they are far from “odourless and cost-free” value neutral systems. They are an arm of the state and with that comes intent and potential escalation up the ladder of the security dilemma. Indeed, it is important to note that there are many ways to use a drone, each of which depends on the nation state concerned and the political-military dynamics of the region in which they are deployed. Each has consequences, not all of which will bring peace and stability to the Arctic.

Caroline Kennedy-Pipe
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What I would first like to do in the time I have available is to take us back to the old Cold War and describe how we thought about the Arctic during the so-called Second Cold War in the early 1980s. I will then draw some parallels with how we conceptualise the Arctic currently.

It is most interesting to hear hearing younger colleagues discuss the Arctic as an inherently peaceful zone. That certainly was never been my understanding of this region. Indeed, when I went back to notes from my studies during that period of Second Cold War, we were describing the Arctic in an altogether different way: in a much starker manner. Really that Arctic seemed rather bare, an area with a sparse population, harsh climate conditions but a place of potentially rich resources. In particular, we had noted, back in 1983, that the United States, Canada, the Scandinavian Countries, and the Soviet Union, were all engaged in competition over oil deposits, fisheries, and other resources. And we stressed that both the Western Alliance and the Soviet bloc were spending millions of dollars fortifying and arming the region. We were keenly aware then in that age of nuclear anxiety, that the Arctic housed the shortest air routes between major cities in Europe, Asia, and the Americas. We made no mention of ice melt, no discussion of climate change: China was absent as indeed was any notion of near-Arctic states. Certainly, globalization and all that that has come to entail for the Northern spaces played second fiddle to military concerns. It was a less peopled space, and our analysis was I must confess less rich than the very textured and current analysis of a vibrant Arctic space.

Nevertheless, a few points from the Cold War still resonate. For instance, it is worth remembering that the Arctic is actually a part of the Atlantic Ocean, the littoral of which includes the land masses of the Northern Hemisphere. Most of the Arctic is ocean. Rather quaintly, we termed it in the early 1980s as “the Polar Mediterranean.” We noted it was crucial strategically as an air route and waterway. In essence, it could be seen as a superpower corridor across the North.

So, for many of us, the Arctic Ocean was not and is not a distant region. Rather, it is a central, connecting area between North American and Eurasian land masses. That feature of geography has not changed. Neither

has the fact that the great powers remain in competition over the North. It has always been the subject of U.S. and Russia competition.

William Seward bought Alaska from Russia in 1867—what a mistake that was for Russia! And, of course, the U.S. has wanted to and recently offered to purchase Greenland. So, the strategic importance of the Arctic has always been with us and remains with us. I would also argue that if we reflect even in simple terms about military history, we might first turn to the great urban battles like Berlin in 1945 or the tragedy of Hiroshima, but the Arctic also played a role. We need only imagine the vital convoys from Iceland and Scotland to Murmansk and Arkhangelsk while noting that German U-boat operations operating extremely effectively out of the Norwegian fjords. It was very important that surface raiders could move from the Baltic Sea into the Atlantic Ocean through the North Sea and the Greenland-Iceland Gap. Allies had to occupy Iceland, the Faroe Islands, and Greenland to protect key areas of contestation. The construction of Thule airbase from 1951 to 1954 cost \$300 million dollars at that time.

We're also now keenly aware of technology in the High North. The Cold War was exceptionally dangerous if we think about 1957 when Sputnik, much to the chagrin of the Americans, was successfully launched. When the Soviet Union launched Sputnik, it caused a massive escalation in American military spending and a scramble to invent and deploy ballistic missile early warning systems, which stretched from Thule through Clare, Alaska to Fylingdales in Yorkshire.

So, this idea that the Arctic has ever been wholly peaceful is one we need to deconstruct. I also suggest that we need to look very closely at what have been perennial pressures on countries such as Norway. If you think of Norway in the Cold War, for example, it was the only European nation, other than Turkey, which shared a border with the Soviet Union. The threat from the Kola Peninsula remained ever-present throughout the Cold War and in 1981 Norwegian aircraft scrambled 117 times precisely because of Soviet incursions into airspace. So, when we discuss the Kola Peninsula, we are obviously still thinking now as then about the Russia threat. So, let me turn to Russia.

There are at least six reasons why Russia remains the most important Arctic player. One point is that, as commentators such as Klaus Dodds have remarked, the Arctic is linked absolutely to Putin's nationalistic agenda. Much has been made of the fact that Russia has significant population centres in the Arctic, some of which are crucial to the oil and gas industries. The Northern Sea Route too provides Moscow with control of a major

shipping route. Russia is the only non-NATO coastal state, and it will protect its European Arctic. This is why we debate, now as we did in the 1980s; is Russian re-militarization or militarization predominately defensive or is it offensively planned?

Here it is important to note that Russian Arctic capabilities remain inferior to the Soviet period particularly in terms of military equipment and infrastructure. The disarray that Russia fell into in terms of its Arctic militarization in the 1990s meant a low base from which to build. Personally, I am less concerned by Russian militarization. The Russians simply do not want a war. It is more concerning that Russia remains adept at asserting, maintaining, and defending its sovereign rights, in the Arctic and indeed elsewhere. For Russia, the Arctic protects the Kola Peninsula, but it also is a gateway to the rest of the world. In that sense, we need to think very hard about the new Russian understanding of sovereign rights and what this means in a changing Arctic.

Sovereignty has many meanings. Russia from Crimea onwards, and even before in Georgia, has been pushing a very clear and oppositional interpretation of sovereignty to the West. We need only think of the justifications for Crimea and sovereign Russian ethnic rights in that part of the globe. We are witnessing this throughout the narrative that the Kremlin spins about Indigenous peoples, but also in places like Svalbard, where again this issue of sovereign rights, as opposed to sovereignty, is becoming ever more important. It is not just a theoretical debate either, but rather a very practical debate across the Arctic over the rights of the Indigenous peoples. Russia has been, in many senses, leading the way in talking about sovereign rights for Indigenous peoples. Because of this tactic, I suggest we need to take account not only of hard military power, but also these perhaps softer levers of power. Russia, of course, is an important focus of all our studies but I would say, we've been here before. And if we think of the crises of the early 1980s, we have yet to see anything quite that dangerous. That is a point made without any complacency. But Russia does need and does seek cooperation under international law, the Law of the Sea, and on all sorts of outstanding issues involving Canada and Norway. There is therefore a heady mix of assertive Russian expansionism, if we can call it that, but also a protective view of its position as an Arctic power with responsibilities.

In 1983, no one thought of the phrase with which we now are familiar: near-Arctic states. We didn't even have that discussion! However, we would now have to regard the category of near Arctic states as indispensable to our thinking. Countries such as China, for example, as Geoffrey Sloan has

discussed elsewhere, are players in the Arctic. What I think is fascinating about China—and here I'll draw a pathway that runs parallel to what Russia is attempting to do in terms of sovereignty—is what Beijing says about human rights, Indigenous peoples, and workforces. There has been a systematic attempt to undermine human rights norms in terms of the Belt and Road Route initiative and I suspect very strongly that this will also be the pattern of behaviour in the Arctic. China has had a long history thinking about Polar politics, and now China's political and economic leverage in the Arctic will prove to be very destabilizing, far more than any Chinese military activity. One example is China's economic penetration, whether it be by buying up or sponsoring companies in Greenland, which might very well create leverage to be operated in that fractious relationship between Greenland and Denmark.

And, of course, Chinese investments in certain areas such as communications, media, new technologies generally—which is something I think we need to think about much, much more than hard military capabilities—create new opportunities for huge political influence and intelligence. So, if I'm thinking about a China in the Arctic, I think it will need to be taken into account that these new technologies, which are non-military or, at best, might be dual-use, are the things that should preoccupy us. And let us not forget either the undermining by China of the rules-based, norms-based human rights regime, from which we have all benefitted from 1945.

So, if we think of a new Cold War in the Arctic—if that is useful to us—the addition of China to the great power competition might prove to be more deadly than the Russia threat.



Photo: Ray Chiasson

Final Reflections

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As the moderators for this workshop, we are indebted to all the speakers for sharing their fascinating insights and ideas on the analytical purchase of the term “Anthropocene,” as great power competition builds in the Arctic region. It is clear to us that ice loss, permafrost thawing, zombie wildfires, oceanic acidification, and violent storms are calling into question the elemental composition of this circumpolar volume. In turn, we see have seen a flurry of reflection and speculation about the future of the Arctic, even as ancient knowledges held by Indigenous communities – and in the ice itself – seem a great deal more precarious. As is now *de rigueur*, what happens in the Arctic does not stay in the Arctic.

A key question to emerge from all of this is whether – as the British strategist Halford J. Mackinder might have argued – to think “Anthropocentrically” is to offer a 21st century perspective on geography and geopolitics that differs from previous centuries in important ways. For Mackinder, the Arctic Ocean was ice-filled and an impediment to British and other great power mobility. Mackinder had no time for Indigenous peoples in his grand scheming. For him, the real locus of geopolitical action was anyway further south on the continental plains of the Euro-Asian landmass and the sea lanes around them. Contemporary China’s multi-trillion-dollar Belt and Road Initiative, which is developing a suite of infrastructural projects such as railways and port facilities, is simply the latest attempt by a powerful state to project power and influence across what Mackinder labelled the World-Island. What is different today is that China is also framing itself as a “near-Arctic state,” with maritime and polar investment in science, trade, and tourism designed to develop a “Polar Silk Road.”

However, as Ingrid Medby warned us, the “Anthropocene” is also a loaded term, with a capacity to obscure the agencies – human and non-human – that have brought us to this point and deny a voice to those for whom the consequences are the most severe. As Jarius Grove has written on “savage ecologies,” the Anthropocenic Arctic could be a starting point to think about the production of unliveable worlds, sacrificial spaces, and the uneven distribution of Arctic future-making. Which futures will be ignored and how does the Anthropocene, as a framing device, continue to privilege the interests of the settler coloniser, the industrial capitalist, the terra-former, the military strategist, and all those who have had reason to make the earth as “stable” and “predictable” as possible in the recent past?

Geoffrey Sloan and Caroline Kennedy-Pipe reminded us that the Arctic has always been part of the world humans inhabit, even when it seemed distant, frigid, and impenetrable to almost all but the Indigenous peoples who made the North their home millennia ago. The Arctic has also seen its fair share of war: every major war in Europe since the Napoleonic Wars (1803-1815) has had an Arctic dimension to it and the recent intensification of military exercises and base-building in the region anticipates future confrontation. At the same time, commercial connections, underpinned by scientific knowledge and infrastructure, have long drawn the Arctic into global currents of production and consumption in new and innovative ways. So, neither Arctic connectivity nor conflict are products of the Anthropocene, but they are shaped by it, as it is undeniable that climate change is transforming the region in dramatic and profound ways.

Of course, as Simon Dalby observed, what the Anthropocene does offer is way of thinking about transformation in a new way: not a state change, so much as a shift from “stationarity” to “non-stationarity,” where the earth is no longer conceptualised as stable, even predictable. Or perhaps as Mackinder might have it, from a static perspective of geography to a dynamic one that recognises changes occurring across multiple “strata” or “volumes.” Either way, a humble recognition that no one knows when, or even if, stability in the earth system can ever be recovered.

While Simon Dalby drew our attention to the fundamental importance to what he terms “firepower” and its role in destabilising the earth system, Mia Bennett’s call to think more seriously about “icepower” may be the only way to reverse course. Could it be that future great power competition in the Anthropocene, whether in the Arctic or elsewhere, will be less about the ability to create energy and heat, and more about the ability to store energy and keep the Arctic cool let alone cold? While local communities in

the Arctic region will hope that rival militaries “keep their cool,” Arctic states and near-Arctic states are seeking to harness strategic advantage in the Anthropocene. At the very least, Arctic states will be carefully watching those who seek to extend their reach in the “new Arctic.” Such questions deserve deeper matterphorical (sic) rather than metaphorical inquiry.

Lastly, we think it is worth pondering the Arctic paradox at the heart of the term “Anthropocene.” It goes to the heart of sense-making and how we think about who, where, and what matters. On the one hand, as Ingrid Medby drew our attention to, we need to think of the Anthropogenic Arctic as a “peopled” concept – which acknowledges the relational and collaborative struggles of communities facing both appropriation and seizure as well as displacement and abandonment. We note that in terms of historic timing, our awareness of the Anthropocene is rising precisely now when Indigenous communities have gained more autonomy and struggled to be recognised as right-holders to land and resources. On the other hand, one of the most extreme consequences of the Anthropocene could well prove to be the “de-peopling” of spaces rendered unliveable by extreme heat, rising sea levels, thawing permafrost, and repeated cycles of violent weather.

Already, as James Rogers remarks alerted us to, there is a tension between the idea of the Arctic as a “peopled” space and the Arctic as a “remote” space, with the latter underpinned by the slow and steady northward march of industrial, military, and scientific-focussed drone technology on land, at sea, and in the air. So, yet again, the Arctic finds itself at the intersection of dynamic regimes of mattering and upgraded types of remote sensing. Indeed, perhaps the real significance of the Anthropocene is that it presents us with the uncomfortable idea of a new “terra and mare nullius” that third parties, armed with new technology and infrastructural super highways, are proving only too eager to exploit.



Photo: P. Whitney Lackenbauer

Afterword

Professor Marsha Meskimmon
Director of the Institute of Advanced Studies,
Loughborough University

This was a fascinating workshop for Loughborough University's Institute of Advanced Studies (IAS) to host as the inaugural event in our Spotlight Series. Our aim with this series has always been to give people a space to gather truly international expertise and discuss research areas of genuine global significance. By rethinking notions of the Anthropocene and other questions of profound impact at a global level of climate change, politics, and science, this workshop has demonstrated not just the hemispheric significance (imaginative and material) of the Arctic, but also highlighted the region's pivotal role as an economic centre, a trade route, a cultural route; as a space for the movement of ideas, imagination, and discourse; and as a region that is central to both war and peace.

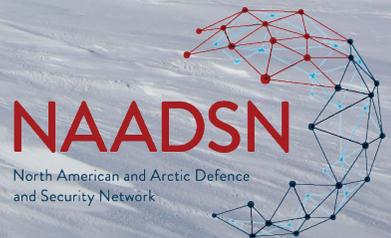
GREAT POWER COMPETITION IN THE ANTHROPOCENE ARCTIC

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