

Master's Thesis

Arctic Medley:

**A Study of the Interplay between Local and Great Power Politics in
the Arctic**

by

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Certification Page

I, SNAEBJOERNSSON, Gudbjartur Mar (Student ID 51119600) hereby declare that the contents of this Master's Thesis are original and true, and have not been submitted at any other university or educational institution for the award of degree or diploma.

All the information derived from other published or unpublished sources has been cited and acknowledged appropriately.



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Abstract

The Arctic region is increasingly becoming an important theatre in the increasingly competitive great power relations. This rapidly increasing importance of the region has created calls for further research into the global political dynamics that shape the Arctic and are in turn influenced by it. To answer that call, this research examines how the Arctic region factors into the increasingly competitive relations between the United States and China. Using a single case study research method and with reference to the theoretical framework of structural realism, this project specifically examines how each states activities and interests in the region relate to their broader balancing strategies. For China, this includes energy security and resources, as well as using its economic power to dissuade Russia from aligning against it. Due to the geographic disposition of the Arctic, it also plays an important role in each state's nuclear strategy. This also applies to the autonomous territory of Greenland, which is particularly vital to U.S. nuclear defence. Greenland is however seeking foreign investments to further its quest for independence from Denmark. In analysing how these two political dynamics interact, the research additionally focuses on the specific case of negotiations between Denmark and Greenland regarding Chinese infrastructure investments, with reference to Putnam's two-level game model. It finds that not only does Greenland play an active, if limited, role in influencing the great power political dynamics, but that it is also empowered in its relations with Denmark by the involvement of other powerful actors.

Abbreviations and Acronyms

A2/AD	Anti-air and area denial
ASW	Anti-submarine warfare
BDS	BeiDou positioning and navigation system
BMD	Ballistic missile defence
BRI	Belt and Road Initiative
CCCC	China Communications Construction Company Ltd.
CLCS	Commission on the Limits of the Continental Shelf
CNPC	China National Petroleum Company
DKK	Danish crowns
EEZ	Exclusive economic zone
ESPO	Eastern Siberia-Pacific Ocean oil pipeline
FDI	Foreign direct investment
FPA	Foreign policy analysis
GDP	Gross domestic product
GPS	Global positioning system
ICBM	Inter-continental ballistic missiles
LNG	Liquid natural gas
Mtpa	Million tons per annum
NATO	National Atlantic Treaty Organization
NFC	China Nonferrous Metal Industry's Foreign Engineering and Construction company Ltd.
NSR	Northern Sea Route
NWP	Northwest Passage
POS1	Power of Siberia 1
PPP	Purchase power parity
REE	Rare earth elements
SCS	South China Sea
SLOC	Sea lines of communication
SOE	State-owned enterprise

SRF	Silk Road Fund
SSBN	Nuclear-powered, ballistic missile-carrying submarine
UNCLOS	United Nations Convention on the Law of the Sea

Introduction

Is the frigid high north of the world becoming a hot theatre for great power competition? Recent events pointing to that include a slew of official Arctic strategy documents from China, the United States, and others, in addition to incendiary statements by officials at forums previously known for amicable cooperation, as well as headlines warning of immense military build-up and security activity in the region. These developments would make one wonder if the region, which was promoted as a 'Zone of Peace' by Mikhail Gorbachev in the closing years of the Cold War (Dahlburg, 1987), is instead quickly becoming anything but. To what degree is the region becoming more geopolitically active then, and what is driving such a development? Further, what meaning does this have for the local politics of the Arctic?

Over the past decade, the Arctic region, most commonly defined as the region north of the Arctic Circle, has indeed taken on an increasingly important role in world politics. The changing world climate is disproportionately affecting the Arctic, leading to record-breaking heatwaves in the region. The changing climate is having considerable effects on the environment of the Arctic and in fact is fundamentally altering the ice-covered geography of the region. The warming climate is leading to a decreasing prevalence of sea ice, leaving the Arctic Ocean ice-free for a few months in the summer. Even under the most optimistic climate change projections, this development is only expected to continue for the foreseeable future (Screen & Simmonds, 2010). This has led to increased accessibility in the region, as new sea-routes open up above both Eurasia and North America, which in turn has led to increased development and investment flowing into the region. This further invites political concerns, as it is said that where merchant ships go, warships are sure to follow. But this trend is taking place concurrently with

another, no less relevant but a far more global one, in the form of an increasingly powerful China and a concurrent deterioration in global great power relations.

Indeed, at the same time the world is witnessing increasingly tense great power relations, as China continues its spectacular economic growth. That economic growth has been followed with increased military capabilities and more assertiveness in global politics. As a result, the relations between the United States and China have become increasingly fraught and marked by intense competition, from which the Arctic is not exempt. In recent years China has upgraded its cooperation with Russia, which in turn has become more active in the region as it has elsewhere, after facing western sanctions due to its belligerent actions in Ukraine and annexation of Crimea in 2014, often referred to as the Ukraine crisis. Those actions additionally caused increased tensions with the North Atlantic Treaty Organization (NATO), which has also become more active in the region. Additionally, China has also stepped up its activities in the region, both in terms of investments and scientific presence. The United States has raised concerns that these activities have an ulterior motive and may in fact facilitate Chinese military presence in the future. Caught in the midst of this is the autonomous territory of Greenland, which has increasingly moved towards financial and political independence from the central government in Denmark.

Since the mid-20th century, when it lost its status as a colony, Greenland has steadily progressed towards independence from Denmark and become increasingly autonomous. However, as the Arctic region is increasing in importance, Greenland's quest for independence has increasingly become intertwined with the region's growing great power politics, as China and the United States both seek influence in the strategically important island. In seeking greater financial independence, Greenland has sought investments in its infrastructure and resource extraction industries, a request which

China has been more than willing to oblige. Fearing that Greenland might become dependent or indebted to China, the United States has also involved itself in the relationship between Denmark and Greenland, pressuring Denmark to use what legal authority it still has to thwart Chinese designs. Interestingly, this seems to have turned out well for Greenland's self-rule government, as Denmark's previous policy of not offering any additional financing for Greenland's infrastructure build-up was overturned and Greenland was offered a much more beneficial agreement. Thus, as the Arctic region becomes an important theatre in the ongoing global great power politics, so too are the local political dynamics bound to become more important as they are more closely intertwined with global politics.

Research questions

In light of the above, there has been an increasing demand for academic research into the political dynamics that are shaping the region. The changes taking place in the Arctic have progressed quickly and happened in a relatively short amount of time. This has resulted in gaps in the academic knowledge of the region at the same time as various governments in and around the region are seeking to formulate or update their Arctic policies. In the field of international relations, there is in fact a growing number of works which have explored the developing political tensions in the region. However, these works are often focused exclusively on the activities and developments taking place within the region and neglect to contextualize them within the global setting and link them to the original causes which are often external to the region. Thus, there are not many works which have examined the topic of Arctic politics comprehensively in relations to global political dynamics and integrated them with theories of international relations which take a systemic view of those dynamics. Additionally, although a number of works

have dealt with the politics of Greenland and its emerging foreign policy, there is again a lack of works which relate them to both Arctic and global politics, especially with regards to the potential influence Greenland's movement towards independence may have on the ongoing great power political dynamics in the region. Thus, this project aims to bridge that gap and contribute to the understanding of international relations in the Arctic, as well as the role of Greenland therein.

In light of the above, this research set out to answer the following research question:

- *In what way do the great power competition in the Arctic and Greenland's activity as a sub-state actor shape and influence one another?*

The objective that this research set out with was thus multifaceted, involving different aspects of the ongoing political developments. In order to understand Greenland's role and importance, the research first sought to examine the ongoing global political dynamics between the great powers and relate them to the Arctic as well as to Greenland. Thus, with reference to the chosen theoretical framework of structural realism, this project specifically sought to elucidate how the activities of great power actors in the Arctic related to their respective global strategies and interest. Firstly, the research focused specifically on the relations between the United States and China in this regard, as the growing competition between them is both relatively recent in both the global and Arctic contexts, but also particularly relevant to Greenland. The second facet of the research then focused specifically on Greenland, investigating the interests and activities of the respective great power actors in the territory, as well as the possible effects Greenland's quest for independence might have in that context. Finally, the research investigated the interplay between these two trends, the great power interests in

Greenland and its quest for autonomy and independence. In particular, the main change which the research sought to explain was the sudden Danish *volte-face* in relation to offering financing for Greenlandic airport infrastructure projects, as well as how this related to proposed Chinese investments in those projects and the broader competition between China and the United States.

Thus, the research was further guided by three research sub-questions:

- *Q1 In what way do the Arctic region and Greenland factor into global great power competition?*
- *Q2 In what way does the great power competition in the Arctic shape and affect Greenland's relations to Denmark?*
- *Q3 And finally, how does Greenland's active pursuit of independence through both foreign interaction and internal interaction with Denmark influence great power competition in the Arctic?*

In this endeavour, the research additionally sought to build upon and expand on previous related work by Takahashi et al. (2019) who examined the case of negotiations surrounding military bases in a similar context. He found that, given certain conditions, the involvement of powerful external actors in the relationship between a national government and a sub-national actor can empower the latter in its relations with the former. Thus, working from his conclusions, this project started out with two hypotheses, *H1* and *H2*, as tentative answers to *Q2* and *Q3*, respectively. Those hypotheses furthermore guided the research with regards to the role of great power competition in Greenland and the Arctic region:

- *H1 The involvement of great power actors in the previously closed relationship between Greenland and Denmark empowers Greenland vis-à-vis Denmark.*

- *H2 Greenland, in its pursuit of independence, actively influences the international politics in the Arctic.*

The project is structured as follows. It starts with an account of the methodology and research methods used in the research. This is followed by a section laying out the required theoretical foundations which are used in the research, including structural realism and its variant, offensive realism, as well as Putnam's two-level game framework. This is then followed by an extensive review of the current literature relating to international politics in the Arctic, which in addition to placing the current research serves to contextualize the main analysis in the following section. The analysis section is then structured by levels of analysis, examining in turn the system, regional, and finally local levels of analysis, before concluding with an overview.

Methodology

Given the focus on the particular political dynamics taking place in the Arctic region, this research was readily conducive to an in-depth single case study research design. This research aims to investigate the interplay between two quite disparate developments, one being the intensifying system level competition between the main great powers, and the other being the local politics between an autonomous region and its central government. In order to illuminate and understand the causal pathway between these developments, there was a need for an approach, which allowed for a very detailed and contextually rich explanation of the process that links them. For that reason, the choice was made to employ a case study research design. Furthermore, this research opted to use an analytical technique called *process-tracing*. This is a technique where the processes that link observed outcomes to potential causes are traced and examined (Lamont, 2015). The research did this by investigating developments at different levels of analysis and elucidating how they are connected to form a causal mechanism or 'pathway' from a system level, through a regional Arctic level, and ultimately down to the local level. Due to the complexity of the relationships between these developments, this research was limited in its ability to find precise causal relationships. Additionally, as a single-case study, this research was limited in its external validity and potential for generalization. However, by maintaining strict adherence to the theoretical frameworks, this research has elucidated how this approach may be replicated in similar cases. This may be the case for other former colonial territories or even devolved regions seeking independence. Great power rivalry, being global in its nature, will be a common and likely significant factor in such cases around the world. Finally, by providing an understanding of how the different developments at each level are connected in a causal mechanism, this

research has aimed to provide a strong foundation for future research to isolate causal variables in the political dynamics of the Arctic region.

The research furthermore took an eclectic multi-framework approach in order to investigate the interplay between great power and local politics in the Arctic. As the causal mechanism in questions operates through different levels of analysis, it also operates at different analytical domains. Each theoretical framework is more or less applicable to a particular analytical domain (Checkel, 2012). Thus, as is explained in more detail in the theoretical section, structural realism provides the greater explanatory power at a system-level analytical domain where the objects of study are state actors. The explanations provided by the theoretical framework could then furthermore be extrapolated to the regional level of analysis, still in the domain of interstate relations. However, when investigating the analytical domain of the semi-internal relations between an autonomous territory and its metropole or suzerain, the investigation moved outside the domain of offensive realism. In order to further explain the causal mechanism between the variables at the system-level and the intrastate level, another framework was required. Thus, this research also relied on Putnam's two-level game to investigate that particular domain. These two analytical frameworks were therefore used in conjunction to examine the same causal mechanism. Importantly, although these analytical frameworks come from somewhat different schools of thought, they do share fundamental aspects in terms of epistemology and ontology, which further enables their integration into a single research project and facilitates the synthesis of a common explanation derived from both frameworks.

Although the primary purpose of this research was to better understand the causal mechanism that connects the political developments in the Arctic to global political dynamics, the employment of the analytical frameworks discussed above also allowed

for an opportunity to contribute to the theoretical deliberations in the field of international relations. Realist scholars, such as John Mearsheimer and Stephen M. Walt (2013), have called for more focus on theory building in the field. Structural realism and its variants have faced critique due to the way they employ the concept of power as a quantifiable object of study, particularly so in the context of interstate relations. Noting the above, this research thus endeavoured to modify the framework of structural realism in a very limited fashion. It has sought to both enable a more qualitative approach to research employing structural realism, as well as to incorporate softer forms of power, particularly economic power, into the theoretical framework. Such a modified approach would better explain economic activities in the context of great power relations, particularly activities which do not seem to make much commercial sense. This is particularly relevant to this case study, as there are numerous instances of economic activities in the Arctic which are not necessarily rational from a commercial view, but could potentially have an outsized influence on the security of the relevant great powers.

Data selection

In order to explain this causal mechanism, the research relied on various sources of data. In order to understand the position of the relevant state actors and to contextualize their activities in the Arctic, the research relied on primary data in the form of policy and strategy documents. Both China and the United States have released Arctic-specific strategy documents in recent years. In the case of China, it released its Arctic Strategy white paper in 2018. Similarly, the U.S. Department of Defence and the various military service branches have all released their Arctic strategies. Additionally, the U.S. Department of Defence releases annual reports on military and security developments involving China. The research also relied on government publications in the case of

Greenland and Denmark, in order to understand developments in their relation and possible effects of growing great power politics. Finally, the research also involved secondary source collection and analysis of media releases to understand and follow developments in the Arctic region. This included both English and Danish language reports on both developments in Greenland and the Arctic in general.

Analytical Approach

This section will examine the analytical frameworks which form a foundation to the later theoretical discussion. As discussed above, this work will primarily rely upon structural realism and the two-level game framework. There are good reasons for opting for an approach based in theoretical pluralism, as the benefits of such an approach have been well examined and have recently borne fruit in a variety of theoretical approaches in the field of international relations (Checkel, 2012). It allows for an explanation of more complex dynamics and events than might be possible with a single theory. It also enables a researcher to utilize explanatory variables in disparate theoretical domains and thus produce a more complete and holistic explanation of a given subject or event.

The chosen analytical frameworks each occupy a relatively separated or detached domain from the other. This means that each framework operates relatively independently from the other, and the synthesis will therefore mainly take place in the explanation itself. Structural realism primarily focuses on the interstate structure, or system, and its effects on states. As will be explained below, it is primarily useful to understand the behaviour of great power states, particularly in the case of more competitive relations such as is increasingly the case with China and the United States. On the other hand, the two-level game framework is focused on the actual relations of specific states, as well as their negotiations concerning potential agreements. Notably, this framework also opens a theoretical window into the domestic political dynamics of a given country, as they are relevant to ongoing or potential interstate negotiations. The use of these two frameworks in conjunction is further facilitated by the fact that they share similar epistemological and ontological foundations. Both have roots in rational choice theory and positivism and, as such, the gap between the two is not very expansive (Checkel, 2012, pp. 224–226). This section will proceed by giving an overview of each framework in turn.

Realism

Realism can best be described as a family of theoretical approaches to explain the behaviour of states and their relations. It can be considered one of, if not the oldest approach to international relations, with its philosophical heritage stretching back to Thucydides' writings on the Peloponnesian wars of ancient Greece. *Classical Realism*, as it has come to be referred to, became a prominent theoretical approach to international relations in the early to mid-20th century. As a result of his seminal work *Politics Among Nations: Struggle for Power and Peace* (1948), Hans Morgenthau has often been cited as the main theorist of this variant. More recent variants of realism owe much to the classical variant, whose main theoretical insights centred around power struggles and protection of national interests as the central feature of international politics. It differed from later variants in what it considers the cause of this feature, namely human nature itself, which it has a very bleak assessment of. It views human nature as being inherently selfish, which manifests in politics as power-seeking behaviour in order to protect and advance one's interests. This is then reflected in international politics and the relations between states, at whose helms are human statesmen (Morgenthau, 2008, p. 57). In the late 20th century, the field of international relations, along with the rest of the social sciences, took a turn to more methodologically rigorous theorization and emphasis on falsifiability. With this, classical realism's emphasis on history and philosophical notions of human nature saw it decline in favour against more scientifically oriented approaches (Korab-Karpowicz, 2018). In his work *Theory of International Politics*, Kenneth N. Waltz (1979) was among the first to formulate a more rigorous approach to Realism, in the form of *Structural Realism*, also known as *Neorealism*.

Structural Realism

As the name implies, structural realism dispenses with previous explanations centred on human nature, in favour of looking at the interstate structure and the effects it has on state behaviour. The most fundamental facet of the interstate structure, that is seen as driving state behaviour, is the condition of anarchy. Anarchy here is the idea that there exists no overarching authority over states to which they might appeal, in case of war or aggression by other states. In addition, the theory makes a number of important assumptions about states. Firstly, it assumes that all states inherently have some capabilities for both defending against foreign aggression, as well as offensively pursuing their own interests. These can be in the form of military capabilities, but could also manifest in more latent economic capabilities, as an example. This gives each state the inherent capability to harm and even destroy other states. Secondly, no state can fully know and predict the intentions of other states, mainly due to the fact that the intentions of states change over time. Thus, no state can guarantee that another state will not act maliciously in the future and is thus incentivised to prepare for that possibility. The third assumption is that a state's primary interest is its own self-preservation. This is assumed to always supersede other goals a state might have. Finally, states are assumed to be rational actors that work towards these interests within their given constraints (Mearsheimer, 2013, pp. 77–80). The major debate among theorists of structural realism, is what states would do given the above-mentioned conditions.

Within the field of international relations, it is possible to discern a few different variants of structural realism. The most notable schism is that between so-called 'defensive' and 'offensive' realism. The core argument of offensive realism is that the pursuit of power with the ultimate goal of hegemony is the only meaningful way to ensure survival. Hegemony here means that a state is powerful enough to completely dominate

a system or region to such an extent that it is not threatened by any other state (Lobell, 2017, p. 4; Mearsheimer, 2001, pp. 32–40). In short, it argues that states are *power maximisers*. On the other hand, theorists of defensive realism argue that expansionist policies are ineffectual and often counterproductive. They will almost always lead to a *security dilemma*, where any gains in power by one state is matched by its rivals which respond in kind. Instead, defensive realists argue that states seek to maximize their security, i.e., they are *security maximisers*. This school of thought also adds various *structural modifiers* to the theoretical framework, which enhance or limit the effects of the structure upon states. These include facets such as military technology and geography which make conquest easier or harder (Jervis, 1978; Snyder, 1996, pp. 168–171). States are thus already considered relatively secure due to these factors, and mainly seek to maintain their relative position within the international system (Waltz, 1979, p. 126). The behaviour of states that do exhibit expansionist or revisionist tendencies, is furthermore explained through those structural modifiers, as well as unit level variables. Both of these approaches can be considered useful and to have explanatory power. However, their difference means that each of them is better suited to certain situations and cases.

It is important to understand here that, as a theoretical model, structural realism operates under certain inherent limitations. As can be understood from the above discussion, structural realism is at its most fundamental a theory about a particular set of structural incentives influencing the behaviour of states. It is as such not so much a theory about the behaviour of states, but rather a theory about the interstate structure itself. The influences and incentives of the structure are not seen as deterministic, except within the model itself. In reality, these incentives are understood to be more or less salient depending on a given situation. That is, they have certain *scope conditions*. For example, the condition of anarchy can be diminished to a large degree in certain situations,

particularly among smaller states (Wohlforth, 2016, pp. 41–42). This incongruity between theory and reality is not necessarily a flaw of the theory itself but is rather an inherent facet of its being a theory. As they are treated within the field of international relations, theories are a creative representation or depiction of an isolated dimension of reality, which they seek to explain. This means that they are inherently highly simplified versions of an isolated section of reality, relying on abstraction and idealization in order to explain that reality. Their usefulness is determined by their explanatory power, which is a function of both how well they can explain the subject matter, as well as how eloquently or parsimoniously they explain it (Waltz, 1979, pp. 4–12). Thus, a theory such as structural realism is both useful but also inherently limited in what it can explain, primarily because of its inherent simplifications as well as the consequent limitations of its scope conditions.

This is given more meaning when the defensive and offensive variants of structural realism are compared. As discussed above, in order to conceptualize states as security maximisers defensive realists add a number of *structural modifiers* (Taliaferro, 2001, pp. 129–132). These increase the applicability of the theory, giving it a potential to explain more in certain situations. However, they come at a cost to the parsimony of the theoretical model. Whether this makes the theory more or less useful can be argued to be dependent on a given case or situation. In cases when the modifiers are particularly salient, they do indeed add to the explanatory power of the theory. For example, it is possible to theorize institutions as a structural modifier (Snyder, 1996, p. 169). In those cases where there are then influential institutions, that limit or change the effects of anarchy and other structural elements upon state behaviour, then the concept of structural modifiers is beneficial to the explanatory power of the theory. If those structural modifiers are not relevant to a given case however, then they in fact detract from the explanatory power of a theory by making it needlessly more complicated.

This paper will therefore proceed utilizing primarily the theoretical framework of offensive realism to explain the relations of the United States and China in the Arctic region. This is for a number of reasons. Firstly, the above discussed structural modifiers are not particularly relevant to the current case at hand and therefore do not outweigh the benefits of taking a more parsimonious approach. Secondly, it can be argued that offensive realism is more suitable to the current case as it can more easily explain China's quest for military dominance and regional hegemony, without resorting to unit-level or other non-structural variables. Notably, the incentives that drive a state towards attaining hegemony are affected by how close it is to attaining that status. The lesser the risks and effort a state must take to achieve the security of being a regional hegemon, the likelier it is to behave as offensive realism ascribes. In other words, the structural incentives described by offensive realism become increasingly salient, the closer a state is to being a regional hegemon (Lobell, 2017). That's not to say that China's behaviour might also be explained by defensive realism to a degree, particularly by arguing for the existence of a security dilemma (Liff & Ikenberry, 2014). However, this would ultimately be tied to the same structural incentives that offensive realism centres on because it would need to explain why China feels threatened in the first place (Scobell, 2012). That China might feel threatened by the behaviour of the United States, and seek power maximization as a result, is simply more parsimoniously explained by offensive realism. This emphasis on parsimony is all the more important in the case of an eclectic multi-framework approach, which is already sacrificing a degree of parsimony in order to better explain a complex dynamic which stretches across multiple analytical domains.

Structural Realism and Power

Some thought must be given to how the concept of power is used in the realist theoretical model, as it is not without contestation. As discussed above, in the offensive realist model all states seek power. For his part, Mearsheimer defines power very simply as assets and resources that states possess. However, this is somewhat problematic. Under this definition, the meaning of power is quite shallow and refers only to a limited range of capabilities. Furthermore, as Mearsheimer recognizes himself (Mearsheimer, 2001, pp. 58–60), under this definition the theory fails to explain cases where vastly more powerful states are defeated by weaker ones such as in the Russo-French war of 1812 and the U.S.-Vietnam war of 1955-1972/5. Thus, power as a concept arguably becomes useless. Indeed, many have criticized realism for how it treats power as analogous to currency (Guzzini, 2009). Instead, another definition more commonly used within the social sciences can be considered. Under this definition, power refers to the capacity of an actor to influence another actor to act in a way that it otherwise would not have (Dahl, 1957). Mearsheimer discusses this definition, but dispenses with it, arguing that it conflates power with outcome and leads to a circular argument (Mearsheimer, 2001, p. 60). However, it will be argued here that this is not necessarily true.

If the concept of power can be fleshed out, it may very well fit usefully within the limited scope of the offensive realist model as it is used here. In a critique of the concept of power as it is used in the realist framework, Guzzini (2009, pp. 5–10) elucidates the concept of power in relation to realism. If power is understood as a capacity to influence, then it must also be understood as both dispositional and relational. It is dispositional in that power refers to a capacity to elicit certain effects, but that this capacity is dependent on certain conditions. Tanks are only relevant in land-based warfare, as a simple example. In a social setting, power is also relational in that it is dependent on the interests and

values a given set of actors holds. Furthermore, it is argued that power is not fungible. That means that power cannot be transferred between different contexts, because being dispositional, power is dependent on the prevailing conditions in a given context. Given the above conditions, power can still be argued to have a use under the realist model. Firstly, power being dependent on the values that states hold is not an issue, as survival is assumed to be the primary value of states, eclipsing any other values they might have. Given that, then the first issue at hand is to understand the specific conditions that are relevant in a given case. In light of the above two qualifications, the capabilities of states can be understood to impart a certain degree of power over another state. In other words, capabilities can be understood to impart a certain capacity to influence in a specific context and given that actors hold certain values. Although as Guzzini argues, it must ultimately be conceded that power in and of itself cannot be quantitatively measured *per se*. Instead, a more qualitative approach can be taken to understand power dynamics by proxy of contextually relevant capabilities.

What capabilities should then be looked at, and what conditions should be considered relevant? The question of relevant capabilities relates to the goals of the actors concerned. This is assumed in the theory to be survival, and by extension the attainment and maintenance of hegemony. Any capability that helps a state achieve hegemony, or conversely helps prevent another state from achieving hegemony, can be considered relevant (Baldwin, 1993, pp. 16–18). That capability should however always be understood in conjunction with the context and conditions where it is salient. In maritime security competition for example, land forces are relatively unimportant. Furthermore, in cases where military armaments have not been brought forth, other capabilities can be considered. This conceptualization of power therefore allows for a much wider inclusion of capabilities than defining power simply as assets or resources.

In order to better conceptualize which capabilities are generally salient, it is useful to think of them in a spectrum ranging from harder to softer forms of power which they impart (Rothman, 2011, pp. 49–55). Thus, on the extreme hard end of the spectrum are military capabilities that are intended to coerce another state into one complying with an intended action. These include traditional forms of capabilities generally considered in realist writings, such as land, maritime and air forces, as well as missiles and nuclear weapons. This is, all other things being equal, the most salient form of power as it directly affects a state's chances of survival. A word is needed on the role of nuclear weapons within the realist theoretical paradigm, particularly since their role is hotly debated. Krieger & Roth (2007) in their work *Nuclear Weapons in Neo-Realist Theory* provide an insightful look at their role. According to them, some theorists such as Waltz (1981) argue that nuclear weapons lead to less war due to the irrationality of using them against a similarly armed opponent. The main question is whether states possess second strike capability, and how reliable it is. Conversely, writers such as Mearsheimer (2001, pp. 129–133) argue that there is a possibility for both a sub-nuclear war and limited nuclear war between nuclear-armed powers. In a war between nuclear armed states, he argues that each state will still operate under the assurance that an opponent will not rationally employ nuclear weapons to annihilate their enemy, fearing equal retaliation. Thus, states could pursue a limited nuclear war, but would not do so with the aim of annihilation but only more limited goals, most likely outside the borders of each state.

On a slightly softer level of the spectrum exist economic forms of power. Economic power was theorized by Mearsheimer as a latent form of power, because it enabled and supported harder forms of power (Mearsheimer, 2001, pp. 23–24). However, economic power can also be understood as a capability in and of itself. Influencing the flow of goods, such as with the exclusion of the Eastern bloc from the Western

institutional order during the Cold War, is but one example. A distinguished political economist of the last century, Albert Hirschman, argued that states could influence the behaviour and capabilities of other states through economic relations *via* two primary ways. Firstly, a state might limit its opponent's access to vital resources or technology, such as uranium for example. Secondly, a state might threaten to alter the economic realities of another state to its detriment, in which case it might be coerced into changing its behaviour. A common example of this are sanctions, a means by which states can use economic power to attempt to alter the behaviour of other states (Krasner, 1996, pp. 114–119). The leveraging of debt and investments to influence the behaviour of other states would be another example of economic power. In addition to economic forms of power, other softer forms of power can also be discerned, including institutions and international norms. However, the further one goes to the softer end of the spectrum, the less salient these forms of power become in light of state survival being the primary value of concern. Thus, these will not be further elucidated.

Applicability of offensive realism to the case of U.S.-China relations in the Arctic

In light of the above discussion, it is possible to justify the application of offensive realism to the given case of the competitive relations between the United States and China specifically in the Arctic region, as well as more generally. Firstly, the main scope conditions of offensive realism are sufficiently met in this case to justify its application. Owing to the simplifications and abstractions inherent to the theory, it can likely never be said that these scope conditions are completely met. Indeed, much has been written on the degree and limits of rational behaviour among states (Mearsheimer, 2009; Rathbun, 2007), and with regards to state survival being the primary and overarching goal, as opposed to for example regime survival (Ameyaw-Brobbe, 2020,

pp. 19–20, 23; Dickson et al., 2017). However, these detractions can be argued to be relatively insignificant and unlikely to overly limit the usefulness and explanatory power of the theory in the present case. This is particularly so considering the much greater fulfilment of the other scope conditions. That China and the United States each possess formidable offensive capabilities is undebatable. Furthermore, due to China's very opaque governance system, it can be argued that the intentions of both states are even less ascertainable than might be the case between two democracies, as an example (Fearon, 1994). The last of the scope conditions, that of anarchy, is also particularly salient among great powers. This is because there is not only an absence of any overarching authority powerful enough to adjudicate between them, but there is also an absence of any other more powerful actor who might get involved in any dispute, such as is the case among lesser powers (Butt, 2013).

Secondly, the increasingly competitive relations between China and the United States, both globally and in the Arctic region specifically, means that the case lends itself particularly well to an offensive realist approach. Realism in general and the explanations it provides have been shown to be most useful in explaining more contentious interstate relations. This is even more the case with offensive realism, which does not see much room for interstate cooperation except in limited circumstances where no actor obviously gains relative to other actors. However, as is discussed below, there is very little cooperation taking place between China and the United States in the Arctic, and none whatsoever with regards to their involvement in Greenland. Thus, due to its focus on confrontational relations, an offensive realist approach can be argued to be more conducive to understanding this particular case. By recognizing the limits of international relations theories in this way and applying them where they are most likely to provide

useful explanations, this work thus takes a more pragmatic approach in attempting to understand the political dynamics in the Arctic.

That's not to say that offensive realism is necessarily a perfect fit. Most notably, the hard power elements which offensive realism generally focuses on do not play much of a role in the China – U.S. relations in the Arctic, at least not on the ground level. Much of China's activities in the region involve investments and loans, an area of international relations which is usually not considered to be under the purview of offensive realism. However, there's a strong argument to be made that offensive realist approach is still very valuable here, despite these drawbacks. As the analysis below will seek to show, China's economic activities in the region are far better understood as being driven by security motivations, rather than commercial ones. By adjusting the offensive realist framework to better account for economic activities as a form of power, this work seeks to understand the increasing Chinese economic presence in the region and what effects it might have. These economic activities can have outsized effects, especially when they have the potential to influence hard power capabilities, such as that of nuclear deterrence. Indeed, in the analysis below it is argued that China's economic activities in Greenland have opened up the potential of significantly influencing the hard power of the United States vis-à-vis China, in terms of nuclear missile defence. Although not as tangible as the deployment of hard power military forces, it is nonetheless a notable form of power which can be understood and explained in an offensive realist framework.

However, the offensive realist framework is inadequate when it comes to understanding Greenland's quest for autonomy and how that might interplay with the great power competition. To better understand that dynamic, this work relies on Putnam's two-level game model.

Putnam's two-level game model

Putnam's two-level game model works well in conjunction with offensive realism, as it focuses on a separate level of analysis. Indeed, theories of International relations can generally be divided based on their levels of analysis. In his work, *Man, the State, and War* (1959), Waltz theorized about three 'images' and their importance in explaining state behaviour. Each of these images roughly correlated with a level of analysis, with the first image looking at individual decision-makers, the second referring to the state and its domestic facets, and finally the third image referring to the structure of the international system, as well as all relations between states. One of the main criticisms of the mainstream theories of international relations, such as liberal institutionalism and structural realism, is their general exclusion of the second and first images, in favour of looking solely at the interstate structure. This has been criticized by many as insufficient to explain the behaviour of states, and generally not taking into account the effects that different domestic situations, as well as decision-makers, can have on interstate relations. Indeed, it has been argued that international relations theories have become almost entirely detached from their sociological foundations (Hudson, 2005). This is of course not the case for all theories in the field of international relations.

A variety of theories and approaches do seek to integrate these different levels of analysis. Constructivism and neoclassical realism consider domestic factors in their explanations of state behaviour and the dynamics of international relations. Furthermore, foreign policy analysis (FPA) is an approach whose purview resides almost entirely within states, as it seeks to explain foreign policy making from the view of individual

actors (Hudson & Day, 2020, pp. 3–36). However, these approaches are somewhat limited in that they only seek to explain changes taking place within either the second or the third image, even though they look at causal factors in other images. FPA looks at how, among other factors, the structure of international relations might affect the foreign policies of states. Conversely, neoclassical realism seeks to incorporate domestic factors to explain changes within the international structure (Hudson & Day, 2020, pp. 210–211). These approaches and theories thus individually fail to capture the mutually causative relationship between two images. In other words, they tend to exclusively consider domestic factors influencing the international image, or vice versa, but not both of these at the same time.

Putnam's two-level game model attempts to capture that reciprocal relationship, albeit in a limited fashion focusing on interstate relations and negotiations. This model proposes that there is a two-level game that every government has to play when they engage in international negotiations. One level is the domestic level, where the government has to respond to various domestic political dynamics, such as interest groups aiming to bring about policy change. Then, on the international level, it also has to respond to international events and processes to safeguard national interests and satisfy domestic demands. When it comes to international negotiations, the model divides them into two phases. Firstly, a negotiating phase plays out on the international level where a 'negotiator' from each government enters into discussion with their counterpart, seeking to iron out a possible agreement. The 'negotiator' can refer to the head of the government or its representative, whoever meets and negotiates with the other government. Whatever agreement is achieved at that level must then be ratified on the domestic level in the second phase. This 'ratification' is a general term referring to any sort of formal or informal process that is necessary for the implementation of the agreement. Most

commonly this is a vote in the legislature of the respective state, but it may also refer to more informal domestic processes such as acquiescence by important institutions or interest groups. It is important to note that these phases do not have to happen chronologically, and can in fact happen simultaneously (Putnam, 1988, pp. 433–437). Putnam then theorizes on how the interaction between these levels informs the range of possible agreements.

Indeed, he posits that the ratification process limits the possible range of agreements which negotiators can achieve in the course of their bargaining. Borrowing a concept from a previous work by Shepsle and Weingast (1987), he calls these limited range of agreements ‘win-sets’ (Iida, 1993, p. 404). In short, the concept denotes a range of possible agreements which a negotiator might make on the international level, which are likely to be ratified on the domestic level. Thus, an agreement is possible only when the win-sets of each actor overlap. Putnam goes into great detail on the variety of factors which influence and ultimately determine the size of any given win-set. In a typical case of voting-based ratification, the most fundamental aspect determining the size of a win-set is the number of relevant voters which prefer an agreement over no agreement. These voters are often divided into various interest groups or political coalitions. The reasons for voter preferences can be either *heterogenous* or *homogenous*, referring to the number of political cleavages which an agreement would touch upon. This becomes important because win-sets can be malleable and change over time. Thus, the negotiator may also seek to influence the size of his or her own win-set, for example through the use of side-payments. For instance, the negotiator might seek to make it larger in order to facilitate an agreement. Conversely, the negotiator might gather support domestically to pose a more united front, but thereby also risking non-ratification in case of a compromise later on. Other factors, such as the charisma and reputation of the negotiator himself can

influence the ratification proceedings, and consequently the win-set as well. Finally, institutional arrangements can also influence win-sets. These can be formal, such as a requirement for a supra-majority or a simple majority. They can also be informal, such as traditions of consensus-seeking, or other norms influencing perceptions (Putnam, 1988, pp. 441–452).

Putnam then theorized what impacts the size of these win-sets would have on negotiations. He hypothesized that the greater the overlap and the larger the win-sets of each side, the likelier it is that an agreement is reached. He also argues that the size of one side's win-set influences their bargaining power. Intriguingly, he hypothesizes that the side with the smaller win-set has an advantage in negotiations. This is because each negotiator has to consider the likelihood that the opposing side might not ratify an agreement. In Putnam's words, they have to worry about *involuntary defection* by their opponent. Thus, a negotiator with a small win-set will not be able to move much during the negotiation process without risking non-ratification. This they can use to their advantage, using their immobility as a means to get their opponent to make more concessions and unilaterally bridge the gaps in the negotiations (Putnam, 1988, pp. 437–440). The accuracy of these hypotheses is however dependent on the level of uncertainty surrounding the negotiations.

Working to expand and build on Putnam's original idea, Iida (1993, pp. 404–405) argued that the degree to which negotiators understand their own and each other's position is variable, and that this has implications for Putnam's model. Indeed, the very idea of involuntary defection assumes that there is a lack of information about the ratification phase, as no one would rationally sign on to a doomed agreement. Although Putnam did consider uncertainty in his model (Putnam, 1988, pp. 452–453), Iida greatly expands upon this by modelling the behaviour of states under *information asymmetries*, or situations

when each state does not possess the same information as its counterpart. In particular, he notes the effects of win-set size upon bargaining power and the chance of involuntary defection taking place. He finds that when a home negotiator has more information about their own domestic constraints than their foreign counterpart, then their bargaining power is increased. This is particularly true when the home negotiator appears to be heavily constrained. This increases the apparent risk of involuntary defection, pushing the foreign negotiator to make more concessions, if they can. In this case, the likelihood of an agreement is not jeopardized since the domestic negotiator will not overstep their constraints. However, when a negotiator lacks information about their own domestic base and how it might respond to an agreement, then the likelihood of an agreement is diminished because of the increased potential of an involuntary defection taking place. Furthermore, the bargaining power of the home negotiator is only increased in case their domestic base is a lot more likely to accept an agreement that is only slightly more beneficial (Iida, 1993, pp. 417–416).

Finally, as it is important specifically for the case in this research, although Putnam's two-level game model is generally applied to negotiations between two separate states, there is nothing precluding its application to cases involving other forms of governments, such as supra- and subnational governments. It is argued here that, as long as there are recognizable distinctions between a negotiator and a ratifier, then the theory is applicable. This has been demonstrated in previous studies of negotiations involving supranational governments such as the EU (Axyonova et al., 2020; Schnapper, 2020) and subnational governments such devolved or federation-state governments (Cheeseman et al., 2016; Ruibal, 2018). Thus, there is a justification for applying the framework in the case of internal and semi-internal negotiations involving relatively autonomous sub-state actors, such as is done in the present research.

This section has introduced the two main analytical frameworks that will be applied to analyse the political dynamics taking place in the Arctic. However, before these political dynamics can be investigated, it is necessary to provide an examination of previous literature on Arctic politics. This will both serve to situate the current research, but also to explain some of the unique facets of Arctic politics and thus further contextualize and provide a background to the increasing great power competition which has only recently started playing an increasing role in Arctic politics.

Background and Literature Review

In order to understand the interplay between great power politics and local politics in the Arctic, it is important to situate the topic and contextualize it with regards to other major domains of research on Arctic politics and security. The environmental changes taking place is one such important factor, as the repercussions impact almost all other areas of research relating to the Arctic. In addition, a great deal of the international politics in the Arctic take place through the auspices of the institutional arrangement in the region. Although these are largely separated from geopolitical and hard-power political affairs, it has played a large role in the research literature on Arctic politics and is the prime reason for a notable divide that can be found there. A major debate within that literature has been about the propensity for conflict in the region, as opposed to cooperation. This debate has been a major research theme on Arctic politics in the 2010s and has produced narratives such as that of ‘Arctic exceptionalism’ emphasizing cooperation, as well as more gloomy predictions of resource conflict in the region. Any research that aims to examine great-power politics in the region has to be situated with this debate in mind. Furthermore, another major area of research has been into the economic development taking place in the region. The growing economic activities in the region are closely intertwined with the regional politics, even precipitating many of the political developments taking place. Most notable of these are the sea routes opening up along both Canada and Russia, which will likely play a large role in both the commerce and geopolitics of the region.

Environmental Changes in the Arctic

Although there are certain global political currents that are feeding into the political developments taking place in the Arctic, many of these developments are in fact a result of the environmental changes taking place in the region. Over the past few

decades, the world has become more aware of the increasing impact of greenhouse gases upon the global climate. This has become more apparent with increasingly erratic weather and warming global temperatures. These effects are however not evenly distributed, with some areas feeling a much greater impact, and much earlier, than other regions. One notable example is the Arctic, which has experienced a greater increase in temperature and more extreme impacts than in most of the rest of the world (Screen & Simmonds, 2010). This is resulting in drastic changes that are fundamentally changing the very landscape of the region. The permafrost supporting infrastructure, cities and agriculture in the Arctic is thawing, leading to increased risk to people in the region. In addition to that, the sea-ice in the region is decreasing, leading to ice-free summers in places that used to be frozen year-round (Ramsayer, 2020; Young, 2019, pp. 4–7). These changes are likely to have adverse consequences for both human habitations, as well as the biodiversity and ecology of the region. Paradoxically, however, they also give rise to more of the same activities that are causing the dilemma in the first place.

In what has been termed the ‘Arctic paradox,’ the changes taking place in the region are likely to result in increased human activity which is likely to further erode the environment in the region. This is because the retreating sea-ice, melting glaciers and thawing permafrost all increase the accessibility of the region (Mitrova, 2019, p. 221). Resources that were previously under thick ice and impossible to get to, are now becoming economically viable to extract. These are both mineral resources and, ironically, hydrocarbon resources such as natural gas and oil (Kim et al., 2019; Palosaari, 2019, pp. 3–7). Although it is true that the changing climate in the Arctic is also leading to more inhospitable and unpredictable weather and iceberg patterns (Lempinen, 2019, p. 4), it is nonetheless of note that economic activity has indeed increased over the last few years. Thus, it seems the Arctic is part of a vicious self-reinforcing cycle of climate change, with

increased access inviting increased economic activity and concurrent increase in greenhouse gas emissions.

Economic activity and its impact

There are a few different types of economic activities that have been enabled by this development. A type of ‘last chance’ tourism has increased over the years, with cruises going as far as the north pole being offered (Kaiser et al., 2018, pp. 197–205). However, the most prominent developments taking place are in the area of resource extraction industries. Although there is a long history of mineral extraction projects in the Arctic, there have been a few recent projects that have been enabled by the increased accessibility (Zeuthen, 2017). This is most notable in Greenland, where a number of projects are planned and two new mines already started operations in 2018 and 2019 (Glomsrød et al., 2020, p. 215). In addition, the extraction of previously prohibitively expensive hydrocarbon projects has become viable.

By far the most prominent recent hydrocarbon project is Russia’s Yamal liquid natural gas (LNG) project. Established in 2017, the Yamal project is the main component of Russia’s development strategy for its Arctic region. The project was established with the idea of shipping LNG west to Europe during the winter months, and east during the summer and autumn months when sea ice conditions are favourable. However, recent voyages have showcased the viability of a year-round delivery of LNG to Asia. China, in particular, has been notably prominent in relation to this project, as will be discussed in more detail in the analysis section. Additionally, there have been large amounts of potentially exploitable hydrocarbon deposits found offshore, with the first Arctic oil platform starting production off the coast of Russia in 2013 (Wallace, 2020, p. 360).

However, it must be noted that there is a debate as to how much of these development projects are a result of environmental changes in the region, with many arguing that local policies play a far more important role.

Much of the economic development of the region is in fact at least dependent on recent changes in local policies, if not largely driven by them. Most of the extraction projects are in a relatively vulnerable position given the narrow margins that Arctic conditions place on them. Difficulties related to transportation and the remoteness of most of these projects, as well as the difficult environmental conditions in which they operate, means that most of the projects are very susceptible to volatility of commodity prices (Cater et al., 2018; N. Johnson, 2020, pp. 97–99; Mitrova, 2019, p. 212; Nymand Larsen & Petrov, 2020, p. 81). Thus, projects with profitable plans at their inception may find their fortunes dashed, as happened with the fall of the commodity price market in the 2010s. An example of this is Greenland's Nalunaq gold mine, which was shuttered in 2013 after a fall in gold prices (Glomsrød et al., 2020, p. 215). In addition to this, some of the projects are in fact not independently profitable at all, at least not in the start. This is the case with the Yamal LNG project which, although being a private project, is only viable with a public-private partnership and various associated tax-breaks and public funding (Mitrova, 2019, p. 218). In Russia's case, this assistance is provided because of strategic national policy of developing the Northern Sea Route (NSR), which the Yamal project relies on.

The NSR and its viability is another important point that is hotly debated and has implications for the long-term security in the region. When the impact of global climate change upon Arctic sea-ice conditions started to become clear, many argued that a major sea change in global trading was on the horizon. It was argued that the shorter shipping times of the NSR, and the Northwest Passage (NWP) north of Canada, would undercut

southern shipping routes (Bennett, 2014; Tianming & Erokhin, 2019). Seeking to capitalize on this development, Russia started focusing more on economic and infrastructure development in its Arctic regions (Galimullin & Matveenko, 2019). It has sought outside investments from countries such as China, India and Japan to finance these projects, albeit with only limited success and mainly from China (Kossa, 2019, pp. 5–6). As a result, many prophesized a vastly increased economic importance of the Arctic, with concomitant political and security issues.

However, recent literature is generally more pessimistic on the prospects of the routes. Most notably, it is argued that while the traffic along the NSR and NWP will indeed grow, it will mostly be destination traffic to and from destinations in the Arctic (Holroyd, 2020, pp. 322–325; Lassarre, 2018; Moe & Schram Stokke, 2019). This traffic mainly supports economic development in the region, providing transport to and from development projects, and contrasts with transit traffic which passes through the region. Many have pointed out the numerous hurdles that such transit traffic faces along the route, however. The fact that the Arctic will remain locked in ice during the winter months for the foreseeable future is one such issue (Hindley, 2019a, p. 268). Uncertainties related to weather and a lack of bathymetric mapping increases insurance premiums, as does the lack of infrastructure along the route, such as search and rescue facilities (Buixadé Farré et al., 2014, pp. 312–316). These uncertainties are also inhibitive of increased container shipping, which relies on a ‘just in time’ economic model (Beveridge et al., 2016, p. 408; Lajeunesse, 2020, p. 48). This means that the cost saving of a shorter route are likely wiped out by costs incurred from unexpected delays. Furthermore, the shallow waters along the route means that there are far greater ship draft limitations than on those passing through the Suez canal (Gosnell, 2020, pp. 194–198). Finally, there are inefficiencies and

capital costs related to ice-capable ships (Hindley, 2019a, pp. 266–272; Solakivi et al., 2019).

This is not to say that the route will not become economical. Bulk shipping does not face the same issues with uncertainties as does container shipping, as was exemplified by the first commercial transit in 2019 which carried a bulk shipment of lumber from Finland to Japan (Otsuka, 2019, pp. 362–363). More importantly, a number of factors external to the Arctic could conspire to make the route viable. Any increase in fuel prices, such as with a global ban on heavy fuel oil or a hike in oil prices, would go a long way to making the route viable. Further, issues of piracy and instability along the southern route, for example in the Middle East, would have the same effect (Theocharis et al., 2019, pp. 127–128). As a final takeaway it can be noted that, although numerous external factors influence the viability of Arctic sea routes, the lack of infrastructure is an important ‘internal’ hurdle that must be overcome if Arctic states wish to see the shipping routes flourish.

With regards to the NSR, Russia has indeed been active in terms of civilian infrastructure build-up along its northern coastline. Although there is a desire to see transit traffic increase, the main view is that the NSR is primarily a domestic route that can facilitate local development and extractive industries (Fondahl et al., 2020, pp. 208–210). To that end Russia has committed 190 billion roubles, roughly equivalent to \$7 billion in purchase power parity (PPP), into the development of diversified Arctic industries, the infrastructure of the NSR, as well as to support hydrocarbon extraction in the Arctic (Petrov, 2019, pp. 54–57). This is a reasonable measure to support a region that contributes as much as 12-15% of Russia’s gross domestic product (GDP), that nonetheless is dealing with issues of emigration and a lack of infrastructure (Fondahl et al., 2020, pp. 197–198). It is however important to note that, although these infrastructure

projects are necessary for the region to develop and flourish, they also pose a security concern for Russia's neighbours. Much of the civilian infrastructure that supports the NSR and the extractive industries is required to be 'dual-use' capable. That means that the particular asset, such as a harbour or airfield, can be used for both general civilian purposes, as well as military ones (Fondahl et al., 2020, pp. 198, 204–208; Zagorski, 2019, pp. 227–229). Thus, it is important to ask if Russia's military capabilities in the Arctic are increasing in conjunction with its economic development in region, as that could have an impact on Arctic security.

Russia and Arctic Security

In addition to the civilian and dual-use infrastructure that Russia has developed, it has also invested heavily in exclusively military focused infrastructure. Along its northern coast, Russia has rebuilt much of the old Soviet military infrastructure and built numerous new bases from the ground up. It has established military facilities on most of the islands and peninsulas of its northern coast, as well as 14 new airfields since 2014 (Åtland, 2018, pp. 2–3). This has fuelled a debate within the field of international relations and Arctic studies as to how much Russia is indeed militarizing the Arctic and to what end. Some have argued that Russia is driven by great-power aspirations, that its military build-up is based on revisionist aims and will ultimately lead to a security dilemma within the Arctic (Åtland, 2014; Staun, 2020, pp. 5–7). However, this seems doubtful, as in terms of military armaments it is difficult to point to a build-up. Much of its efforts there could be characterized as modernization, rather than actual upgrading of capabilities. Taking its naval forces as an example, most of the newer armaments being procured are meant to replace an ageing and soon-to-be obsolete stock of Soviet armament (Boulègue, 2019, pp. 17–19; Parnemo, 2019). As thus, although there is in fact an increase in capability due to

these efforts, it can be argued that it is better understood as preventing degradation of its capabilities in the long-term. In addition, many of the planned additions have also faced repeated and significant delays and cancelations. Finally it is often noted that, if there is indeed actual Russian military build-up in the Arctic, it still pales in comparison to the Soviet era (Staun, 2020, pp. 11–12). Indeed, there does seem to be a mismatch between literature and actual numbers. Multiple articles cite official plans for force expansions as a clear sign of a military build-up (See for example Klimenko, 2019; and Wezeman, 2016, pp. 13–16), yet these plans often go unrealized and actual force numbers change relatively little. The more interesting arguments instead note the diverse reasons for Russia's infrastructure-focused capability increase.

Much of the literature on Russia is rather more reserved, arguing that its aims are more defensive and reactive. As discussed above, Russia has indeed invested heavily in military, civilian and dual-use infrastructure in its Arctic region (Boulègue, 2019, pp. 7–10; Fondahl et al., 2020, pp. 205–206), but these capabilities are generally considered more defensive in nature. Many argue that Russia aims to establish an anti-air & area denial (A2/AD) zone in the Arctic, as evidenced by numerous anti-air and sea-denial capabilities along its Arctic coast (Boulègue, 2019, pp. 43–45). As is stated in Russian official documents, this can be understood to serve a twofold purpose (Klimenko, 2019, pp. 8–9). Firstly, it protects the economic development in the region, such as the LNG projects which Russia has branded as strategic assets. It also gives Russia the capability to enforce legal claims on the route and resources on the continental shelf, should the need arise (Åtland, 2018, p. 4; Boulègue, 2019, pp. 3, 7–9, 17–18). Many of the dual-use facilities are aimed at maintaining sovereignty over the area, an increasing necessity with increased traffic of foreign flagged vessels. It must also be noted that dual-use facilities are not always conducive to increased military capability. It is sometimes the case that

the military is forced to share facilities with civilian actors, when previously it was the sole operator (Zagorski, 2019, pp. 227–231).

Secondly, by setting up an A2/AD zone Russia seeks to protect its sea-based nuclear deterrent. Up until now, Russia has largely followed a so-called *bastion* strategy, wherein it maintains traditional superiority over the Barents sea (For a more detailed discussion of the concept, see Åtland, 2007). This has provided a safe haven for its nuclear-powered ballistic missile submarines (SSBN), a vital part of Russia's nuclear deterrence strategy, particularly with regards to second-strike capability. However, the decay of Russia's traditional capabilities in the north following the end of the Cold War, coupled with the effects of climate change, can be seen to degrade the security of its SSBNs. Multiple authors have argued that the receding sea ice is in fact degrading Russia's Arctic security, particularly as it relates to the bastion strategy (Boulègue, 2019, pp. 7–9; Koizumi, 2019, pp. 75–83; Staun, 2020, pp. 9–11). The ice cover used to provide reliable protection to its SSBNs who could stay hidden under it for prolonged periods. Now, the sparse sea ice has made them more vulnerable to anti-submarine warfare (ASW) and made them more difficult to protect. Furthermore, the increased accessibility has opened up the potential for NATO and the US to station vessels with ballistic missile defences (BMD) capabilities in the Arctic Ocean. In the long run, this could have the effect of degrading Russia's second-strike capability. However, although the Russian administration has voiced concern over such a development and warned NATO against it, Russia's immense redundancy in its nuclear capability means that these BMD capabilities would not affect its nuclear deterrence in the short and medium term (Åtland, 2018, pp. 4–5). In this context, Russia's military build-up in the Arctic can be seen as relatively reactive to a changing environment, and to have comparably defensive intentions. That is not to say that NATO countries perceive it as such, however.

Even if Russia's reasons for its military build-up might be considered defensive and preventative, it may still be viewed as threatening by Russia's neighbours. Koizumi (2019) argues that this may even result in a security dilemma in the Arctic. Even if Russia's aim may be to rectify the erosion of its security caused by environmental changes, NATO nations nonetheless see this as a threatening development, particularly so in the context of Russia's recent actions. Following the Ukraine crisis further south and the annexation of Crimea, NATO nations have increasingly developed a perception of Russia as a threat (Boulègue, 2019, pp. 28–29). Coupled with provocative actions by Russian forces during patrols and exercises in the Arctic, this has led to a view among NATO nations that, limited as it may be, the military build-up is a threat that requires a response (Åtland, 2018, pp. 5–9). This is the rationale underlining the recent NATO exercises in the region. The increased assertiveness by NATO then leads to mutually heightened threat perceptions (Flake, 2017). Whether this will lead to conflict or not is an open question, but multiple authors have warned against the dangers posed by accidental escalation (Åtland, 2018, pp. 7–8; Boulègue, 2019, pp. 28–33; Wezeman, 2016, pp. 21–23). That relates to a long-running and extensive debate within the international relations literature on the Arctic, about the potential for conflict vis-à-vis cooperation in the Arctic.

Conflict or Cooperation in the Arctic

The debate on the viability of cooperation and conflict is by now quite long running. Even before the Ukraine crisis and the increased tensions between Russia and the West, there were many who were warning of an increasing potential for conflict in the Arctic. After Russia planted a flag at the ocean bottom of the North Pole in 2007, it caused media furore and alarming articles that a scramble for the Arctic and its resources had begun (For an oft cited example, see Borgerson, 2008). Although most researchers

were and are more inclined to point out the cooperative nature of the region, there was a marked increase in more warning articles following the 2014 crisis in Ukraine. Not only did these discuss the dangers posed by a resurgent Russia and a potential security dilemma, but also potential conflict related to maritime border disputes and resources. This argument was fuelled by the fact that the Arctic is home to vast quantities of hydrocarbon reserves, some of which are to be found in disputed areas (Olesen, 2014, pp. 6–8).

One contentious argument regards the sovereignty of the newly opening shipping routes. Both Canada and Russia claim that they have sovereignty over these routes and hence the ability to regulate traffic and extract taxes. They base this assertion on an article in the treaty of the United Nations Convention on the Law of the Sea (UNCLOS). Article 234, the one in question, states that countries can regulate sea traffic within their exclusive economic zones (EEZ) to protect the environment, if parts of the EEZ are ice-covered waters (Auerswald, 2020, p. 266; Bartenstein, 2019, pp. 340–342). However, the interpretation of the article is controversial due to the very vague wording (Bankes & Madalena das Neves, 2020, pp. 384–385). Thus, China, the United States, as well as the European Union and several European governments have voiced opposition to the interpretation (Brady, 2017, pp. 556–558; Kim et al., 2019, p. 23; Lajeunesse & Huebert, 2019, pp. 226–231). They argue that the NWP and NSR constitute international straits. This means that they are passages across territorial waters or EEZs that connect parts of the high seas. In these instances, countries whose waters they traverse cannot impose any restrictions on the traffic along the passage (Byers & Lodge, 2019, pp. 57–60).

This has become a somewhat contentious issue for both Russia and Canada. Canada sees the maintenance of sovereignty as one of, if not the main priority with regards to its Arctic policies (Lajeunesse, 2020, pp. 42–46). Similarly, Russia views control over the NSR as vital, both with regards to sovereignty as well as economic

development. Thus far, Russia has required almost all shipping traffic along the NSR to have a Russian icebreaker escort and to pay associated fees (Long, 2019, pp. 250–252). For its part, the United States has been the most vocal about its opposition. There have been discussions of the possibility of conducting freedom of navigation operations along the NSR and even the NWP, in order to emphasize their status as international straits, although no such operation has been conducted to date (Fahey, 2018). Additionally, the issue has long been a thorn in the relations of Canada and the United States, more so recently when the American secretary of state admonished Canada's 'illegitimate' sovereignty at the same time as he called out Russian and Chinese actions in the Arctic (Lajeunesse, 2020, pp. 42–47). This particular dispute is also notable for the peculiar set of bedfellows on each side, with the United States and China on one side and Canada and Russia on the other. It thus has the potential to have implications for other disputes in the region, which it cuts across.

Another overarching dispute in the Arctic relates to the extension of continental shelves. As per the UNCLOS treaty, a state's continental shelf gives a state exclusive sovereign right over exploitation and exploration of all non-living resources on and under the seabed. This continental shelf can be extended up to 350NM from the state's coastline, or up to 100NM from the 2500m isobath. In order to extend it, states must provide detailed data to the Commission on the Limits of the Continental Shelf (CLCS). The CLCS will then offer its recommendation on the outer limits of the shelves, from which states can set up a legitimate delineation of its extended continental shelf (Bankes & Madalena das Neves, 2020, pp. 377–380). Only after receiving the recommendation, can states enter into an agreement among themselves on the delimitation between their respective continental shelves (Gavrilov, 2019, pp. 158–160). With the sole exception of the United

States, which has not ratified UNCLOS (Herrmann & Hussong, 2020), all the Arctic littoral states have made claims to an extended continental shelf into the Arctic Ocean.

There are a number of potential points of tensions between the various claimants. The claims of Denmark, Canada and Russia broadly overlap each other, as they constitute large swaths of the seabed around the North Pole. They must however await the recommendations of the CLCS before being able to enter into negotiations of delimitation. Although this has been largely a non-conflictual dispute so far, early on Russia made a number of contentious actions and statements. Most notable is the planting of a Russian flag at the North Pole seabed in 2007, mentioned above, which sparked long running narrative on a 'scramble' for Arctic resources (Carlson et al., 2013; Greaves, 2019, pp. 6–7; Schofield & Østhagen, 2020, pp. 182–184). Additionally, there are concerns of increased tensions following the release of CLCS recommendations. In the light of its military build-up, Russia might ignore potentially unfavourable recommendations and impose a unilateral de facto control over the claimed Arctic continental shelves (Käpylä & Mikkola, 2019, pp. 161–162; Kriz & Chrastansky, 2018, pp. 124–127; Pezard et al., 2018, pp. 4–9). China also factors into this, as it stands to be the biggest beneficiary in case the seabed is not considered part of the continental shelves. This is because developing countries, of which China is the largest, have preferential access to seabed mining contract in areas of the high sea (Brady, 2017, pp. 558–564). There are however numerous reasons to assume that the dispute will be solved relatively amicably and will not descend into conflict.

Despite the above discussion focusing on the potential for conflict, the majority of literature is in fact relatively optimistic with regards to cooperation in the Arctic. With regards to the narrative of a 'scramble' for resources, it is noteworthy that the vast majority of known Arctic resource deposits are within the EEZs of Arctic states or within

their territory. The resources that are to be found outside EEZs, such as the ones in the disputed areas of continental shelves, are furthermore much less economically viable due to difficulties of extraction and transportation (Le Mière & Mazo, 2013, pp. 51–54; Østhagen, 2020, pp. 159–160). Thus, the debate around the continental shelves can be argued to revolve more around prestige and symbolic stances for domestic consumption, rather than economic imperatives (Kriz & Chrastansky, 2018, pp. 126–127; Pezard et al., 2018, pp. 6–8). Furthermore, a good case can be made that since the states are in fact all likely to be gaining territory at the expense of non-Arctic states, they have a mutual interest in being equally complicit (Exner-Pirot, 2020b, p. 311). In addition, whereas many cited maritime border disputes as possible sources of conflict, the most precarious of those have been amicably solved in the past decade and a half (Schofield & Østhagen, 2020, pp. 185–186). Most notable of those is perhaps the treaty of the Barents Sea between Russia and Norway, signed in 2010, which solved one of the most contentious border disputes in the region (Vylegzhanin et al., 2018). It seems to be a common theme among those authors warning of resource based Arctic conflict to point to Russia as its most likely source. Although it is true that Russia's bellicose rhetoric and belligerent actions elsewhere give credence to that argument, it is also true that Russia has by far the most to lose from an Arctic conflict. Not only would such a conflict threaten its nuclear deterrence, but also its economic interests there. Most of the undisputed resources are in Russian territory and any conflict would put the extraction of those resources, as well as the viability of the NSR, into jeopardy (Keil, 2014, p. 166; Olesen, 2014, pp. 8–14).

In fact, a common theme among the more optimistic literature is that mutual interest among the Arctic states is what is most conducive for cooperation. All the states in the region have some shared level of commercial interests, whether it be resource extraction, trade, or tourism. In addition, all the states seek to develop their Arctic regions

economically and sustainably. Any conflict or political uncertainty in the Arctic would upset these goals (Heininen, 2019, pp. 219–226; Schaller, 2020, pp. 324–327). With regards to their maritime claims, all the states seek the legitimacy that they can only have by abiding by the relevant international laws (Koivurova, 2011; Olesen, 2014, p. 9). Additionally, they also have common low-level interests in areas of environmental protection, research, as well as human safety including search and rescue (Exner-Pirot, 2020b, pp. 309–311). This is vital, as it allows for avenues for low-level international cooperation that fosters trust-building. It was largely on the basis of these common low-level interests that much of the institutional and rule-based regional order was formed.

In addition to common interests, much of the literature focuses on the vital role that regional institutions play in fostering cooperation among Arctic states. The most notable regional institution is the Arctic Council. Established in 1996, the Arctic Council's goal was indeed to promote cooperation among Arctic states, particularly in areas of low-tension such as environmental protection, economic development and scientific cooperation (Auerswald, 2020; Chater et al., 2020; Heininen, 2019; Wiseman, 2020; Young, 2019). Although explicitly excluding traditional security issues from its prerogatives, the Arctic Council has had much success in these areas of lower-level policy, even facilitating three legally binding international agreements exclusive to the region (Koivurova et al., 2020, pp. 415–417; Lambach, 2020). Further, it is notable that cooperation has continued largely unabated through the period of increased tensions between Russia and the West following the Ukraine crisis. This is also the case with other institutions, such as the Arctic Coast Guard Forum (Exner-Pirot, 2020a, pp. 99–103; Henriksson, 2020, pp. 20–22), Barents Euro-Arctic Council and the Northern Forum as well as a host of less institutionalized and trans-national organizations (Chater et al., 2020, pp. 44–48). It has been argued that the reason for this is that Arctic states value regional

cooperation on certain issues to such an extent that they choose to compartmentalize relations and maintain lower-level diplomacy even as they cut all contact at higher levels (Byers, 2017, pp. 388–394; Exner-Pirot, 2020a, pp. 102–103; Henriksson, 2020; Østhagen, 2016).

In addition to regional institutions, international institutions also play a vital role in regional cooperation. As the region is mostly a maritime one, the most important international institution would likely be UNCLOS. As discussed above, UNCLOS facilitates cooperative division of the Arctic seabed, as well as prescribing rules for the regulation of traffic (Durfee & Johnstone, 2019, pp. 180–199). Even though there are indeed disputes as discussed above, it is notable that all the Arctic states have committed themselves to following relevant UNCLOS legislation and international laws, as well as the recommendations of the CLCS (Pezard et al., 2018, pp. 4–5). Thus, the disputes remain mostly of a legal nature, at least for the moment, which gives credence to the argument that Arctic relations are mostly cooperative. In addition to UNCLOS, another relevant institution is the International Maritime Organization (IMO) and its conventions that govern operations in the world's seas. The most notable of those conventions is the recently agreed upon Polar Code, which specifically relates to safe operation in the hazardous environment in polar waters, as well as specific provisions for environmental protection (Graczyk, 2019; Hindley, 2019b). In addition to the regional institutions, these form a complex, multi-faceted network of institutions that together form a governance regime for the Arctic.

This complex institutional regime can also be seen to be quite enduring, as the Arctic states have a strong incentive to maintain it. That is because the current regime privileges Arctic states and gives them almost exclusive governance over the region (Exner-Pirot, 2020b, pp. 311–313; Stokke, 2014). This becomes important as

international interest in the region increases and non-Arctic states seek to find ways to exploit the opportunities in the region. The Arctic Council allows for non-Arctic member states, but strictly as observers and on the condition that they recognize the sovereignty of Arctic states and commit to following all international laws that apply to the Arctic. A similar mutual interest is derived from UNCLOS as it privileges Arctic littoral states with the exclusive utilization of large swaths of the Arctic Ocean seabed, even though they have to divide it among themselves (Byers, 2017, pp. 392–395).

Throughout the literature on international relations in the Arctic region, there seems to be a relatively broad consensus that the multifaceted institutional regime in the Arctic discussed above facilitates cooperative relations among Arctic states. The fact that there are various open lines of communication on many different levels and policy areas can be seen to thwart any risk of miscommunication and inadvertent escalation of disputes. Most if not all areas of potential dispute have relevant frameworks to facilitate cooperative resolutions (Kriz & Chrastansky, 2018, pp. 124–134). Many have thus argued, in a liberal institutionalist vein, that anarchy in the Arctic is largely ameliorated and that complex interdependence largely prevents disputes within the region from escalating to conflict. The fact that the Arctic states have made advances in regional cooperation since 2014, even as they engage in open rivalry in other regions, has led some to go so far as to argue that the region is ‘exceptional’ in international affairs. The narrative of ‘Arctic exceptionalism,’ as it has come to be called, relates to the idea that the Arctic states have chosen to compartmentalize their relations in the Arctic away from contentious relations elsewhere, and engage in cooperative multilateralism instead (Exner-Pirot & Murray, 2017; Lackenbauer & Dean, 2020; Wilson Rowe, 2020). Thus, they argue that the Arctic has in fact been a beacon of hope and success in regional cooperation amidst a more turbulent world.

Although this narrative has been prevalent since the collapse of the Soviet Union (Young, 1992), it has recently faced increased criticism (Gjørsv & Hodgson, 2019; Käpylä & Mikkola, 2019; Young, 2019). Although the regional cooperation was quite resistant to spill-over effects from the Ukraine crisis, it did not escape unscathed. Sanctions on Russia had major impacts on economic and technological cooperation in the Arctic and are a major obstacle to further development of its Arctic regions. Further, although the United States has in the past been relatively uninterested in Arctic affairs, and was even described as a ‘reluctant Arctic power’ (Huebert, 2009), this has changed over the last couple of years (Käpylä & Mikkola, 2019, pp. 163–165). With increasing military activity from Russia and China’s newfound strategic interest in the region, the United States has found itself becoming more active in the Arctic, both in its relatively bellicose statements and in its actions as it fleets new icebreakers (Bertelsen, 2020, pp. 63–66; Østhagen, 2020, pp. 362–367). Thus, there is concern that great power politics may reshape the Arctic in the years to come. It remains to be seen if the cooperative relations that the Arctic region has seen in the past, will endure.

Having explored the various ongoing regional political and economic dynamics that have shaped Arctic politics thus far, this paper will now turn towards the analysis of the above-mentioned great power competition which is playing an increasingly important role in Arctic politics.

Analysis

This section will endeavour to understand the great power relations, particularly as they relate to the Arctic. In this, it will be more biased towards the relations of China and the United States. As the previous section explored Russia and its relations with NATO, this section will mainly consider them when they are relevant to China-U.S. relations. There are a number of reasons for this focus. Firstly, in order to keep the scope of the project under control it is better to be selective with regards to where the focus is. This will allow for a more in-depth analysis and a closer look at ongoing dynamics. Secondly, as a more recent great power actor, both in the global sense but particularly in the Arctic, there is more to unpack and discover by focusing on China. Finally, although the current tensions between NATO and Russia are indeed showing a renewed dynamism, particularly within the Arctic, it is ultimately a continuation of a long and well explored saga. On the other hand, the relations between the United States and China are more dynamic and less settled than that of NATO and Russia, again particularly so in the Arctic region.

This section will thus proceed by moving from a global, system-level perspective down through lower levels of analysis before focusing on the case of Greenland and its interplay with great power relations. By starting from a global perspective, the relations of great power actors within the Arctic region is given greater context and holistic clarity. As Arctic affairs do not take place in a vacuum, it is important to understand how they feature in the global picture and how each state's behaviour in the Arctic relates to their global strategies. Additionally, the analysis will be more theoretically grounded, as the major theories all start from a global or system-level perspective. The regional-level analysis will then examine the interests and activities of the United States and China in the Arctic, respectively, and how they relate to each other. Moving to the local level

analysis, first the interests and activities of the great powers in the territory of Greenland will be closely examined. Then, these activities will be contextualized in the semi-internal political dynamics between Greenland as an autonomous region, and the central government in Denmark. Notably, the paper will seek to highlight Greenland's movement towards greater independence, and how that process influences and is influenced by the interests and activities of China and the United States in the territory. For that purpose, it will finally focus on the specific case of negotiations between Greenland and Denmark regarding Chinese financed airport infrastructure projects in Greenland. Relying on Putnam's two-level game model, the paper will seek to investigate if and how these negotiations were influenced by the regional great power competition. It will also seek to investigate what influence, if any, Greenland's actions had on that competition, before bringing the paper to its conclusion.

The global relations of China and the United States through the lens of offensive realism

It is undeniably a pessimistic view of global politics that is provided by an offensive realist analysis. The explanations provided by the theory provide a basis for understanding the deterioration of relations in recent decades, as well as predicting that this will likely continue into the future. Although there is some ground for cooperation in select areas, it is argued that in general the relations between China and the United States will increasingly be marked by competition and rivalry. Thus, there is little hope for anything but a temporary rapprochement, nor a return to peaceful relations. Additionally, as time goes on there is a small but increasingly significant risk of war between the states.

The primary starting point for a realist analysis is to examine the power balance between the respective states. The first thing to note then is the obvious power disparity

between the states, with the United States being a regional hegemon and maintaining military capabilities far superior to that of China. This power disparity is also evident in the number of allies that each country possesses. In that respect, the United States maintains numerous alliances and security treaties, which contrasts sharply with China's sole defence treaty with North Korea (Mearsheimer, 2014, pp. 384–393). With regards to economic power the disparity is not as sharp, with China boasting the largest economy in the world in PPP terms and consistently higher economic growth. That disparity in growth, the associated change in capabilities, and the potential for it to continue into the future, are indeed the main factors that are driving each state to alter its behaviour with regards to the other.

As China's economy has grown, so too has it sought for ways to increase its military power relative to both the United States and its neighbours. With that goal in mind, it has focused on building up its hard power capabilities, pursuing a modernization of its military forces. This has accelerated in recent years, as China aims to complete this modernization process by 2027, while additionally expanding its military capabilities with the aim of attaining a 'world class military' by the centennial of the CCP in 2049 (Fravel, 2020). It has matched these ambitions with a steady increase in its defence spending, which consistently outstrips the growth of its economy (Noguchi, 2011, pp. 69–70). The ultimate goal of China in this case is to acquire sufficient capability to deny outside powers from easy access to its region, and ultimately to become a regional hegemon with the ability to strongly influence the behaviour of its nearest neighbours (Mearsheimer, 2014, pp. 370–380). However, it must again be emphasised that it still has a long way to go. It has faced difficulties with corruption and structural reforms of military forces (Sacks, 2021). Additionally, although it has made some high-profile acquisitions of sophisticated equipment, its land forces are heavily comprised of obsolete

equipment (Boyd, 2019), and its naval forces still rely heavily on smaller coastal vessels (Mainardi, 2021). Therefore, while it is certainly in China's interest to increase its capabilities with the ultimate aim of achieving regional hegemony, it cannot easily afford a confrontation with the United States or its powerful regional neighbours. Thus, in addition to the long-term goal of enhancing its capabilities, China also seeks to quickly shore up strategic shortcomings in order to decrease the risk of a conflict in the short-term.

One such shortcoming is China's vulnerability to maritime blockades and interruptions of its sea lines of communications (SLOC), stemming primarily from its reliance on imported energy. To lessen this vulnerability to its energy security, China has pursued diverse strategies. Firstly, in order to protect its SLOC in its adjacent waters, the area inside the so-called first island chain, it has sought to build up A2/AD capabilities in those regions (Brady, 2017, pp. 74–76; U.S. Department of Defence, 2020, p. 72). In addition to decreasing the risk of blockades, this measure also serves to decrease its vulnerability to any maritime based attack which have been a historic weak point for China, as well as serving a potential role in the event of a Taiwan contingency (Noguchi, 2011). Secondly, to protect its SLOC in faraway maritime regions, it has sought to increase its power projection capabilities. It has established both military and dual-use facilities along its main SLOC (Garlick, 2018, pp. 528–532), leading through the Indian Ocean to the Middle East from which it imports almost half of its oil supplies (Zhou, 2021). Additionally, it has sought to improve its naval and power-projection capabilities in order decrease the risk associated with sensitive straits, such as that of Malacca, Lombok, Makassar, and Hormuz (Mearsheimer, 2014, pp. 79–80). Finally, China has sought to lessen its reliance on those vulnerable SLOCs. It has made some progress in this, by diversifying its energy suppliers by increasing imports from Central Asia and

Russia. Additionally, it has sought to increase redundancy by creating alternate routes for the its oil supplies originating in the Middle East, such as through pipelines projects in Pakistan and Myanmar (Shaikh et al., 2016), although the utility of those is disputed (Erickson & Collins, 2010; Garlick, 2018). These actions are ultimately aimed at increasing China's power relative to its neighbours and the United States.

The United States has responded by attempting to balance against China's growth, as well as countering its activities where possible. Increasingly, the United States has pursued a strategy of 'containment' in its dealings with China. This means that it seeks to prevent China from overly increasing its influence in the region, as well as from taking overt military action against its neighbours in order to increase its own power (Mearsheimer, 2014, pp. 384–388). In pursuance of that strategy, the United States has to some extent focused on internally balancing against China by maintaining it relative capability gap. It has maintained a relatively high defence expenditure at around 3%-5% of GDP, although it is admittedly lower than what it was during the Cold War (SIPRI, 2020). Additionally, it has increasingly sought to emphasize countering Chinese activities as opposed to continuing its entanglements elsewhere (Esper, 2020, pp. 1–6; U.S. White House, 2021a, p. 11; United States Government, 2018, pp. 2–4). In addition to maintaining the capability gap, the United States has also taken actions to counter and delegitimize China's activities in the SCS and elsewhere. Most notably, it has kept up pressure by performing freedom of navigation operations in disputed areas where China is building artificial islands as part of its A2/AD efforts mentioned above (Rej, 2021). These operations serve not just to challenge China's activities, but also showcase the presence of the United States in the region. That in turn is an important part of another aspect of the United States' balancing strategy, that of external balancing.

In addition to internal balancing, the United States seeks to engage other major powers in China's region in pursuit of a strategy of external balancing. Of course, the United States is not the only country concerned by China's increased power. The steady growth of China's military capabilities has unnerved its regional neighbours, with some of whom it is engaged in territorial or maritime disputes. Additionally, China's actions to protect its SLOC and fortify its near-abroad have also caused alarm among other major powers. This notably applies to Australia and India which are adjacent to China's SLOC and are particularly affected by those activities (Garlick, 2018, pp. 528–532; Mearsheimer, 2010, pp. 394–396). The United States has in the past relied on these regional powers for the purposes of balancing against China. This strategy has sometime been referred to as 'offshore balancing', where regional powers are relied on to prevent any one of them from rising up to become a regional hegemon (Mearsheimer & Walt, 2016). However, it has become obvious that this strategy alone has not worked. Thus, in order to effectively 'contain' China, the United States has increasingly pursued a more multi-faceted strategy and invested its own forces alongside regional ones. One of the more notable manifestation of this is the Quadrilateral Security Dialogue, or the Quad for short. Consisting of Australia, India, Japan and the United States, the Quad as a grouping has wide-ranging ambitions related to maintaining a 'free and open Indo-pacific' (U.S. White House, 2021b). Among other goals, it aims to increase the interoperability of their respective militaries, for example through military exercises and intelligence sharing (Vanak et al., 2021). Although left officially unstated in the first joint statement by the grouping, the shared concern of China's increasingly assertive and belligerent behaviour is the primary issue which has brought the group's members together (Kutty & Basrur, 2021; Smith, 2021).

A counter-balancing coalition is something China can ill-afford, and as such it has responded with attempts to disrupt this development. Notably, China has sought to employ its softer capabilities, particularly its economic power in the form of trade and investment relations. It could be argued that it effectively employed these during a previous incarnation of the Quad in 2007, when Australia bowed out due to its economic vulnerability (Rudd, 2019). China will likely again seek to test the unity of the grouping, having already put economic sanctions on Australia while offering vaccines to India during a particularly bad outbreak in the midst of the COVID-19 pandemic (Lal, 2021). Although China has not engaged in much external balancing, outside the relatively diminutive case of North Korea, it has opportunistically used its soft power capabilities to enhance its other balancing activities against the United States and other members of the Quad. A good case in point is Pakistan, with which China has fostered economic relations through its Belt and Road Initiative (BRI), consequently aiding Pakistan's balancing vis-à-vis India. Additionally, although the main strategy of China's investments is generally to pursue commercial profits, it has also sought to allocate its investments in such a way that might provide future strategic opportunities. The port of Gwadar is a case in point, as China's involvement there has opened up the possibility of gaining naval access there in the future, opening up opportunities for further reinforcing China's balancing against India as well as enhancing the security of its SLOC (Iwanek, 2019). China will no doubt seek similar opportunities elsewhere, including in the Americas and the Arctic, with Greenland being a pertinent example discussed further below, where it might either enhance its own balancing or alternatively degrade the capabilities of other powers (Mearsheimer, 2014, pp. 377–380).

A final point of note on the global context of the growing competition between these powers is the role of nuclear weapons capabilities, as well as the balance between

the two states on that front. Although it might be argued that, in a similar fashion to the Cold War, nuclear deterrence will act as a pacifying influence with regards to direct confrontation or war. Although this is true, particularly regarding any strike on the homelands of either state, there are reasons to believe that it is so to a considerably lesser extent in Asia than it was in Cold War Europe. This is because war in Asia is more likely to be limited and have fewer incentives for dramatic escalation. This in turn lowers the costs associated with any potential war and increasing its likelihood (Mearsheimer, 2014, pp. 394–398). In addition to this is the fact that the balance of nuclear deterrence is not static. In fact, it is continuously developing as new technologies and capabilities come into play. The United States has in the past two decades built up a robust BMD system with the aim of neutralizing China’s relatively small nuclear deterrence, as well as that of other lesser powers (T. Zhao, 2020, pp. 12–26). At the same time, China has made progress in fielding a credible sea-based nuclear deterrent, in addition to enhancing its land-based capabilities (U.S. Department of Defence, 2020, pp. 85–89).

Arctic level of Analysis

As noted in the start of this section, Arctic politics do not take place in a vacuum and are in fact deeply interwoven with global political dynamics. This is doubly so for great power competition, as any actions taken by great powers in the Arctic region are related to broader strategies, goals, and dynamics. Having given an overview of the increasingly competitive relations of China and the United States on the global level, the following discussion will seek to examine the interests and activities of each actor in the Arctic region, in addition to contextualizing them in their respective global strategies.

The United States' and China's security interests in the Arctic are multifaceted and varied. China has extensive interests related to its energy security and other resource interests. These include most importantly hydrocarbon imports from Russia, both in the form of LNG and oil, as well as mineral interests in various places in the Arctic. Additionally, it has manifold interests related to its balancing vis-à-vis the United States. For its part, the United States' security interests in the Arctic primarily involve the countering of any balancing related activities on behalf of China, in addition to balancing against Russia. These two balancing activities are often one and the same, as is the case with the maintenance of its BMD capabilities. This is because the U.S. BMD project has the potential to significantly affect the nuclear deterrence capabilities of both Russia and China, at least in the long term. Furthermore, the security interests of the United States and China are often intertwined with other interests, particularly interests related to economic prosperity and research. Therefore, the activities the states conduct in the region often have multiple different goals and interests. This discussion will however focus mainly on the security interests, and how they inform each state's activities.

China's energy security and external balancing interests in Russia's high north

Of the states discussed above which have aligned themselves with the United States in counter-balancing China, there is one state that is conspicuously absent. With a shared territorial border stretching thousands of kilometres and relatively recent history of border skirmishes, it is perhaps a bit surprising that Russia has not opted to balance more assertively against China. In fact, some have predicted that eventually Russia will be compelled to shift its alignment towards that of the United States and balance more against China (Mearsheimer, 2014, pp. 362, 391, 2020). Instead, if anything is to be made from the public display of friendship between their respective leaders (R. Zhang & Zhou,

2020), as well as their increased security cooperation (AP News, 2020; Simes, 2021), it would rather seem that the countries are joining in a strategic partnership. To what extent is that the case, then? Has China been able to prevent Russia aligning against it due to shared interests?

Unsurprisingly, the relations between the two states are more complicated than public appearances would suggest. The two states do in fact have notable clashes of region-specific interests. This is notable in Central Asia where the two powers vie for influence, in addition to the South East Asia where Russia-Vietnam military ties are a vexing factor in China's SCS strategy (Korolev, 2016, pp. 390–393, 395–397). However, while it is true that the two powers do engage in these regional hedging strategies vis-à-vis each other, it is also undeniable that they are increasingly aligned with regards to system-level goals. Specifically, they have shared interests in balancing against the United States and curtailing its influence in their respective near-abroad. As discussed above in the background section, Russia has many concerns regarding NATO and its operations in its periphery. Additionally, there's a common view in Russia that NATO's rapid expansion following the end of the Cold War is encroaching into strategically sensitive areas, a view that is mirrored in China regarding the United States' operations in the SCS (Stutter, 2018, pp. 3–9). As such, Russia and China do in fact have shared interests on which to base, if not an alliance, at least a conditional partnership. This partnership is furthermore supplemented and strengthened by the two countries' convergent interests in the Arctic, most notably with regards to resources.

Indeed, one of China's core interests in the Arctic is the utilization of resources and development of shipping routes. Discussed at various points in its Arctic Policy white paper published in 2018, resource utilization and development of shipping routes are an explicit policy objective, viewed as important due to the "huge impact on the energy

strategy and economic development of China” that it would entail (The State Council of the People’s Republic of China, 2018, Chapter II para. 2). Furthermore, in its white paper China notes its capacities to provide a market for resources extracted in the Arctic, and to finance both the extraction projects as well as the infrastructure along shipping routes to increase the viability of their development. Additionally, China also advances the ‘Polar Silk Road’ concept as a means of connecting Arctic development to its wider BRI project and providing financing to facilitate infrastructure projects and economic development along the NSR (The State Council of the People’s Republic of China, 2018, Chapters II, 3). The ‘Polar Silk Road’ concept notably was also mentioned in the draft of China’s 14th 5-year plan, as an important component of the BRI (Lanteigne, 2021b; Wang, 2021). It is therefore clear that the development of resources, and of the necessary shipping routes to transport them, are major policy objectives of China in the Arctic.

It is important to note here however, that China’s interests in Arctic resources are multifaceted and involve economic, political, and military dimensions. Thus, it is true that commercial interests are absolutely a factor in China’s activities in the Arctic. However, a strong argument can be made that its interests in resources and shipping there are in fact primarily geo-strategic. Its interests in resources are primarily driven by its quest for increased economic security, while its support for the NSR is mainly meant to serve that goal. As discussed earlier in the background section, the NSR does not have immediately obvious commercial value as a transit route – rather it is vital in supporting development projects in the Arctic (Brady, 2017, pp. 60–114). The importance of strategic considerations in China’s calculations are made clear when one considers that China places a lot of emphasis on its Arctic ventures even though other regions may be more commercially promising (De Buitrago, 2020, pp. 100–104; Kirchberger, 2016). Thus, while China may in part be hedging on the NSR becoming commercially viable in

the future, its newfound focus on the Arctic and its resources is primarily strategic and in particular related to its energy security and the diversification of its SLOC.

China's interests in Arctic resource development and its quest for increased energy security have been well received in Russia which has been seeking financing for the development of its northern regions. Over the past years China has invested heavily in Russian hydrocarbon projects, such as the Yamal LNG project. Initially the Russian project faced major difficulties due to the western sanctions which cut off western financing, technology and cooperation with major petrochemical companies (Beixi, 2018, pp. 63–67; Gasper, 2018). It was in the wake of this that the China National Petroleum Company (CNPC) and the Silk Road Fund (SRF) acquired a 20% and 9.9% stake in the project, respectively (Holroyd, 2020, pp. 323–327; Mitrova, 2019, pp. 216–2017). The CNPC additionally entered a 15-year contract for 3 million tons per annum (mtpa) of LNG (Long, 2019, p. 246). These investments were furthermore followed up with financing loans of €750 million, €9,3 billion and €9,8 billion loans, respectively from the SRF, the Export-Import bank of China and the China Development Bank (Soldatkin & Astakhova, 2016). Thus, Chinese financing comprised a majority of the \$27 billion needed for the project. China is also involved in the expansion of the project in the form of a new terminal called LNG 2, set to be operational in 2023. CNPC and the China National Offshore Oil Corporation each have a 10% share worth \$2.5 billion in the new terminal which is slated to deliver another 3 mtpa to China (Aizhu & Jaganathan, 2021; Gosnell, 2020, p. 199; Grisons Peak LLP, 2020, p. 1).

Additionally, although they are sub-Arctic projects, the Eastern Siberia-Pacific Ocean oil pipeline (ESPO) and the Power of Siberia 1 gas pipeline (POS1) are two other major energy projects. ESPO started operations as far back as 2011, but recent expansions in 2019 have meant that Russia has overtaken Saudi Arabia as China's largest oil exporter

(Shagina, 2020; Yagova, 2019). POS1 started operations in 2019 and has the capacity to deliver up to 38 billion m³ of natural gas per year (ca. 28 mtpa equivalent) (Gazprom, n.d.; Ishikawa & Tabeta, 2021). The related Power of Siberia 2 project has also received official approval, but that project aims to deliver 50 billion m³ of natural gas per year from the Yamal gas fields in the Arctic via a pipeline traversing Mongolia (Pallardy, 2020). Finally, the China National Chemical Engineering Group signed a deal to develop the Payakha oilfield project valued at \$5 billion (Chun, 2020).

In addition to the investments into energy projects themselves, China has also invested into ships and infrastructure along the NSR which support its energy investments. In fact, a large part of China's investments and other participation in the Yamal LNG project involved financing of a large seaport at Sabetta and an adjacent international airport (Weidacher Hsiung, 2016, pp. 249–251). Additionally, Chinese companies have been involved in the investing and procurement of LNG carriers, including ice-capable ones. COSCO Shipping Energy Transportation Co., Ltd is involved in the financing of 18 new LNG carriers, including 14 Arc7-class icebreaker LNG carriers (Long, 2019, p. 246). These icebreaker carriers are important as they allow for year-around deliveries of LNG to Asia, even without normal icebreaker escort, whereas previously shipments to Asia were only made in the summer and fall months (Lanteigne, 2021a). Although most were constructed in South Korea, four of them were constructed in China by Hudong-Zhonghua Shipbuilding, which also seeks to be involved in the procurement of 15 additional LNG carriers meant to support the new LNG 2 terminal (Humpert, 2020a). In addition to the carriers, China was also involved in the financing of a \$300 million upgrade to port facilities in Murmansk (Staalesen, 2017), as well as a deep-water seaport in Arkhangelsk and a connected railway line (Buxbaum, 2016; Long, 2019, p. 247). The latter is notable as the railway line would connect the port to China across Kyrgyzstan,

opening up a route for goods destined for Western markets (Nilsen, 2020). These investments showcase China's deep interests in the development of the NSR and Arctic resources, but they also point to Russia's role in China's global strategic considerations.

Although the primary goal of these investments relates to securing China's energy supply and SLOC, there is an argument to be made that they also serve a broader Chinese goal of forestalling Russian counterbalancing against China, if not even bringing it into closer alignment with China on the global stage. As discussed above, China has a very strong interest in preventing Russia from balancing against it in alignment with the United States. As China's hard power capabilities would be inadequate, if not ineffective for this goal, China has instead utilized its softer economic capabilities in order to stave off such a development. In essence, it is argued here that China is seeking to use its economic resources as inducements to alter the payoffs faced by Russia in deciding whether to balance against China or not (Rothman, 2011). In this context, the Arctic investments discussed above are only a portion of the total investments China made in Russia. Over the period of 2012-2017, Russia in fact received \$194.4 billion in investments from China, more than any other Arctic nation including the United States (Rosen & Thuringer, 2017, pp. 52-57). In conjunction with this, trade between the two state has steadily increased over the years, passing \$100 billion per year in 2018 and with \$200 as the target for 2024 (Hillman, 2020, pp. 2-3). Russia has generally been receptive of these advancements.

In this, it can be argued that Russia has been swayed by its security calculations as it seeks to lessen its dependence on European markets following the Ukraine related sanctions and increased tensions with NATO. However, Russia has also sought to prevent an overreliance on China and sought to include other Asian actors in its projects, such as Japan and India. It has however been frustrated in this by recent events. Japan joined in on western sanctions which has limited its involvement in Russia's energy projects

(Shagina, 2020). Regarding India, its relatively warm embrace of the revived Quad initiative and seeming alignment with the United States have also disrupted Russia's security calculations (Khan, 2021). These developments have increasingly pushed Russia to rely more on China, even as it seeks to prevent an overreliance on any single market or actor (Newlin et al., 2020, pp. 3–4). Yet it is also obvious that there exists a great deal of distrust between the two states. This is perhaps neatly reflected in the lack of cross-border constructions that involve roads instead of pipelines. As the latter cannot transport people or armies, keeping crossing points few may indicate a hedge against future Chinese aggression (Hillman, 2020, pp. 4–5). Further indications of this mistrust can be gleaned from incidents such as the one in June 2020, when the president of the Russian Arctic Academy was charged with treason for conducting espionage on behalf of China, passing to them documents related to hydro acoustics research and submarine detection (Tétrault-Farber & Reuters, 2020). However, despite Russia's distrust and preference for non-alignment, military cooperation between Russia and China has increased considerably.

The two countries have in fact followed up the economic cooperation with increased military and strategic cooperation in recent years. In 2019, the two countries upgraded their relations to a 'comprehensive partnership for coordination in a new era' (The State Council of the People's Republic of China, 2019, pp. 42–44). Although arms trade between the two states has decreased with improvements in Chinese arms productions and technologies, there is still new cooperation initiatives on BMD and missile early warning systems (China Power Team, 2018; Stefanovich, 2019). The countries have also taken part together in military exercises. China took part in Russia's large scale military exercises for the first time with VOSTOK in 2018 and then again with TSENTER in 2019, deploying 1600 troops and a variety of ground based and aerial

military vehicles in each case (U.S. Department of Defence, 2020, p. 135; Z. Yang, 2018). Additionally, the two countries participated in smaller scale military drills in 2020 and 2021, including extreme cold weather exercises comparable to Arctic conditions (Simes, 2020, 2021). It is worth noting however that none of these exercises took place in the Arctic proper.

For its part, the United States seems to view the increased cooperation between China and Russia with concern, particularly their strategic relations and military cooperation in the Arctic. Both the revised U.S. National Security Strategy for 2018, as well as the Interim National Security Strategic Guidance, group Russia and China together, viewing them as the United States' main strategic competitors bent on shaping 'a world consistent with their authoritarian model' (U.S. White House, 2021a, pp. 7–9; United States Government, 2018, p. 2). This view is only more pronounced and noticeable in the various Arctic-specific white papers of its military departments and service branches. In its Arctic strategy, the U.S. Department of Defence views the Arctic as a potential corridor between the Indo Pacific and Europe, which Russia and China can leverage to further their 'strategic objectives through malign or coercive behaviour' (U.S. Department of Defence, 2019b, p. 5). Additionally, Russia and China are specifically grouped together in the Arctic as threats or a concern to U.S. interests in the Arctic, in the recent Arctic strategy documents of the U.S. Army (2021, p. 15) and Coast Guard (2019, p. 10) service branches, and the Departments of the Air Force (2020, p. 6) and the Navy (2021, pp. 2–4), with the last one also calling for more assertive operation to compete against them. Regardless of whether these policy documents are grounded in fact or speculation, they do showcase that the United States sees the potential for further alignment, if not an unlikely alliance, between Russia and China as a matter of great concern, particularly in the Arctic region.

But China's activities and interests in the Arctic extend beyond cooperation with Russia and increasing its energy security. In recent years, China has also engaged in various activities in the Arctic which have the potential to enhance or enable its broader internal balancing against the United States.

The role of the Arctic in China's internal balancing against the United States

The Arctic region itself serves a potential role as a theatre for China to advance its balancing against the United States. Many of China's activities in the Arctic have inherent dual-use facets to them. This applies particularly to its research and space related Arctic activities, which it has ramped up considerably in the last decades. It should be reiterated that these activities of course serve a variety of Chinese interests besides the security related ones discussed here. Its research activities in the Arctic are for example important for climate science, as well as giving China a greater say in polar governance (Brady, 2017, pp. 163–178). Similarly, China's Arctic-specific space activities also serve commercial interests, as well as important roles in providing infrastructure and support for the NSR and supporting the aforementioned research activities. However, due to the dual-use nature of these activities, they also have the potential to serve China's security interests. This fact has made the Arctic ground-based satellite infrastructure, which China needs to support much of its space program, quite contentious and has resulted in disputes with host countries. This is also the reason that the United States has been vocal about its concerns regarding those activities and the impacts they might have on its own security interests. Specifically, it is concerned that China's space and research related activities in the Arctic serve to enhance not just its traditional military capabilities, but its nuclear deterrence as well due to their potential to support future SSBN deployment in the region.

Regarding its space related activities, there are a number of projects relevant to the Arctic which China is pursuing, the most prominent of which is perhaps the BeiDou Positioning and Navigation System (BDS). The construction of the system was completed, and achieved global coverage, in June of 2020. In short, it is an alternative to the Global Positioning System (GPS) operated by the United States Space Force and serves the same function. At its core it is thus a dual-use system which can be used for a variety of purposes, but most notably it enhances command, control, communications, computers, intelligence, surveillance, and reconnaissance capabilities. It thus is vital for facilitating the launching and operation of missiles and other weapon systems, as well as the detection and tracking of foreign ones. This imperative to set up the BDS was in fact made obvious to China during the 1996 Taiwan strait missile crisis, when it lost track of its missiles after their GPS signal was allegedly cut off (Chan, 2009). In addition to its relevance to missile launches, the system also has a potential to provide effective communication to submerged submarines (Chan, 2019). Finally, China also has a number of satellites in polar orbit dedicated to remote sensing (Humpert, 2020b). This refers to a dual-use application which can be used for both surveillance and intelligence gathering, as well as for bathymetry, or the mapping the ocean floor, which is particularly important for submarine operations (Brady, 2017, pp. 83–84; Wiehle et al., 2019).

However, in order to provide effective coverage over a region, the BDS and other satellite systems rely on numerous satellite ground stations to receive transmissions (Goswami, 2020). In regions without these ground stations, such as the Arctic, the functionality of the BDS are limited (Y. Yang et al., 2020, pp. 5–6). Additionally, ground stations in the polar regions are important as they can provide significantly faster communication to polar-orbiting satellites, as well as improving the positioning accuracy of satellites. Thus, China has sought to set up ground stations in the Arctic in order to

extend the coverage of the BDS and support other satellites. In 2016, China established such a ground station at the Esrange space station in Kiruna, Sweden (Brady, 2017, pp. 149–153; Chen, 2016). However, the station became controversial when the Swedish Defence Research Agency noted the potential for military use (Jåma & Olofsson, 2019). The future of the station has come into doubt, as the Swedish Space Corporation, which entered into an agreement with China on the station, decided not to renew any contracts with China as of September 2020 (Barrett & Ahlander, 2020). Furthermore, China also discreetly opened a remote-sensing satellite ground station in Greenland in late 2017, without the knowledge or permission from the Greenlandic or Danish authorities (Lindqvist, 2017). The opening ceremony included a 100 strong Chinese group consisting of diplomatic and academic elite, including a rear admiral and notable figures related to the Baidu system, which had posed as a tourist group to avoid attention. Although it is unclear whether the station is still operational or if it was shut down, a Danish rear admiral did comment on the potential for espionage and military applications, and the Greenlandic government also voiced its concerns, after the station's existence was reported by the Greenlandic media (Lulu, 2017; Turnowsky, 2017).

China also operates various research stations in the Arctic, whose research projects sometimes entail dual-use facets. These include the Yellow River station in Svalbard, Norway, the China-Iceland Joint Aurora Observatory in Iceland, as well as a long-term iceberg station in the Arctic Ocean (Brady, 2017, pp. 149–153). Notable dual-use research projects include those related to geomagnetic and ionosphere research. The former involves mapping the geomagnetic field in Arctic. This has anti-submarine warfare (ASW) applications as it can be used in conjunction with magnetic anomaly detectors to locate submarines and other large metallic objects, which appear as an anomalous divergence from the natural geomagnetic background. Ionosphere research

can furthermore have application for satellite navigation and communication (Brady, 2017, pp. 110–112). It is also notable that although the China-Iceland joint aurora observatory was originally meant to focus on auroral research, its focus expanded shortly after its inauguration and included other research areas, most notably satellite remote sensing and geomagnetic research (Schreiber, 2018). The research done by these stations is then further supplemented with repeated research expeditions to the Arctic.

China has sent multiple research expeditions to the Arctic, but these have notable security implications, including hydro acoustic research and bathymetric mapping. These research expeditions are generally supported by China's icebreaker research vessels, the *Xue Long* and *Xue Long 2*. Although *Xue Long* has mainly focused on Antarctic expeditions, it has also undertaken 10 Arctic expeditions since its launch (U.S. Department of Defence, 2020, p. 132). These expeditions have involved increasingly sophisticated oceanic surveys, with autonomous underwater vehicles being deployed from 2010 onwards for more detailed surveys (Brady, 2017, pp. 84–85; Xinhua, 2018). However, being a converted Ukrainian carrier, the *Xue Long* was not well equipped for research purposes. This prompted the construction of the more sophisticated *Xue Long 2*, which then completed its first Arctic expedition in 2020 (Staalesen, 2020; U.S. Department of Defence, 2020, pp. 132–133). Although the research done by these vessels and their expeditions serve many interests, including understanding climate change and facilitating NSR operations, some of the research activities involve inherent dual-use facets (Koh, 2020; Pincus & Berbrick, 2018). This applies particularly to both bathymetric mapping, as mentioned above, as well as hydro acoustic research. Both of these fields of research enable better navigation for submerged submarines, while hydro acoustic research additionally aids in their concealment. The latter is doubly important in

the Arctic, as ambient noise caused by pack ice can both aid in concealment, as well as interfere with navigation (Brady, 2017, pp. 83–85).

The United States, as well as some of its NATO allies, have expressed concern about these facets of China's research. The U.S. Department of Defence (2019a, p. 114) is perhaps the most explicit in its concern, noting that China's "civilian research could support a strengthened military presence in the Arctic Ocean, which could include deploying submarines to the region as a deterrent against nuclear attacks." This was then emphasized in the 2019 meeting of the Arctic Council, where then secretary of state Mike Pompeo warned of the dual purpose of Chinese research and investment activities. The United States furthermore pressured its Arctic allies against participating in China's BRI and 'Polar Silk Road' projects or of supporting its research initiatives, warning of hidden ambitions (Hauksdóttir, 2019).

The potential for China to operate SSBNs in the Arctic may in fact constitute one of its primary Arctic security interests, which is why the above discussion has focused on how space and research projects interplay with the viability of submarine operations in the region. As was briefly discussed above, the United States has built a robust BMD system in the past years, with multiple interceptors in Alaska and California. Although the United States claims that this is primarily intended to stop limited strikes, the increasing capacity of the system has forced China to react by ensuring the viability of its deterrence capabilities (Colby et al., 2013, pp. 20–23; Riqiang, 2015; T. Zhao, 2020). To an extent, it has done this by simply increasing its offensive nuclear capability by increasing the number of its nuclear weapons. However, with the limited viability of fissile material, which China stopped producing in the 1980s (Logan, 2020; H. Zhang, 2017), there exists an impetus to seek other, more effective means of maintaining the nuclear deterrence. China has therefore also placed an emphasis on making progress in

the development of credible sea-based deterrent, in the form of SSBNs. In that regard, the Arctic region represents a potential opportunity for China to enhance its nuclear deterrence.

This is because the region offers a number of advantages with regards to the survivability and effectiveness of SSBNs deployed there. As mentioned above, the ambient acoustic noise in the Arctic makes the detection of submarines in the region exceedingly difficult. Additionally, the seasonal sea-ice cover provides protection against ASW, as well as making visual and satellite detection difficult (Brady, 2017, pp. 83–87). Thus, a SSBN in the Arctic would represent a far more resilient second-strike capability, than one deployed in the Pacific Ocean, where they are far easier to track by foreign ASW capabilities. An additional factor is the closer proximity to the continental United States. China's SSBN-launched missiles do not have the range to strike the U.S. mainland from the relative safety of the SCS. Furthermore, the distance a missile would have to travel would be far shorter if launched from the Arctic Ocean, versus one launched from China's mainland. The value of this is in the shorter travel time, as it gives U.S. interceptors a far shorter time to react, thus essentially bypassing the U.S. BMD system entirely (Goldstein, 2019). China's more modern SSBNs already have the technical capability of operating in the Arctic, but are unable to do so safely without proper surveys of ocean floor and acoustics being in place (Brady, 2017, pp. 79–87). This has prompted significant concern from the United States, which has repeatedly called out the dual nature of China's research in the region. Beyond the deployment of SSBNs in the region, the Arctic also plays an important role in China's and the United States' nuclear strategies in other respects.

Indeed, due to the geographic disposition of North America vis-à-vis Asia, the Arctic is inherently strategically important with regards to the nuclear strategies of

powers in the northern hemisphere. The shortest trajectories of any intercontinental ballistic missiles (ICBM) to and from these continents will almost invariably traverse the Arctic or very close by it. This includes not just China and Russia, but also lesser nuclear powers such as Iran and North Korea. This is also the reason why satellite coverage over the region, such as that of the BDS, is important to both the United States and China, as it further enables the detection of missile launches (Brady, 2017, pp. 107–109). This is also the reason for the Chinese and Russian cooperation on new BMD and early missile warning systems, mentioned earlier, as the geographic disposition of each country enables this. The United States and its BMD system is furthermore designed around this fact. Due to its location, Greenland offers an optimal position from which a radar and satellite station might facilitate early detection and accurate tracking of ICBMs fired against North America. This is perhaps the primary reason that Greenland is so important to the United States, and why it chose to set up its BMD system on the island in the first place (Saitou, 2019).

The importance of Greenland in Arctic great power politics

Greenland has in fact played an outsized role in the United States' nuclear strategy throughout the 20th century. Greenland is an autonomous constituent part of the Kingdom of Denmark, having been colonized first in the 10th century, and then again in the 18th, after the first one had perished. Since as far back as the 19th century, the United States has made several unsuccessful attempts to purchase the island from Denmark due to its strategic location, with the most recent attempt in 2019 leading to a diplomatic fallout with Denmark (Breum, 2019). It occupied the island during the second world war, with the acquiescence of the then rogue ambassador of Denmark, following the German occupation. As the importance of the island only increased during the Cold War, the

United States secured basing rights on the island from Denmark by extending the Danish Defence Agreement on 27th of April 1951, originally signed on the 9th of April 1941 (Nuttall, 2019, pp. 100–103; Petersen, 1998). The United States established bases in *Thule* and *Søndre Strømfjord*, although the latter base was abandoned shortly after the Cold War ended. Initially, their primary strategic value was as a staging point for nuclear bombers. Later on, however, with the advent of ICBMs, Thule became valuable as a radar hub both for tracking soviet submarines and as a node in the United States' nascent BMD system. Although its importance declined after the Cold War, it has increased again in recent years as tensions with Russia and China have increased (Rahbek-Clemmensen & Nielsen, 2020, pp. 78–81).

In its role as a BMD hub, Thule is a part of a larger system and works in conjunction with radar stations in Fylingdales in the United Kingdom, Vandenberg airbase in California and Fort Greely in Alaska. These provide early warning and facilitate the operation of ground-based interceptors stationed in Fort Greely and Vandenberg. What is interesting is that with the completion of the BMD system and its continued enhancement, the value of the radar station in Greenland skyrocketed, as without it the functioning of the whole system would be compromised (Saitou, 2019, pp. 64–66). There are however other reasons for the importance of the Thule base.

In addition to its role in the U.S. BMD system, the strategic importance of Thule and Greenland is also increasing for other reasons. The Thule base is the northernmost base of the U.S. armed forces, as well as having the northernmost deep-water port in the world (Ministry of Foreign Affairs of Denmark, 2011, p. 54). Thus, with the increase in tension and great power activities in the Arctic region, the value of the base for conventional power projection has therefore similarly increased. Russia's military build-up is particularly important here. Its investments in new submarines has highlighted

Greenland's role in NATO's ASW strategies, as it is a part of the so-called GIUK gap, a strategic choke point through which submarines must pass to enter the Atlantic (Priess & Rasser, 2020; Rhode, 2019). Furthermore, one of Russia's newly constructed military bases, the Nagurskoye base in Franz Josef Land, is close enough to pose a threat to the Thule airbase as it is within range of Russia's combat aircraft (Danish Defence Intelligence Service, 2020, pp. 15–16; Rahbek-Clemmensen & Nielsen, 2020, pp. 78–81). This is furthermore compounded by the perceived alignment between China and Russia, as they can be seen to pose a dual threat both globally, as well as regionally in the case of the Arctic (Weber, 2020).

China's footprint in Greenland

China has in fact also been quite active with regards to Greenland, especially in terms of investments. Over the years 2012 – 2017, Chinese foreign direct investment (FDI) to Greenland amounted to approximately \$2 Billion. Although this is magnitudes less than China's investments in Russia, its effects are far greater due to the small size of Greenland's economy. With an annual GDP of around \$2.7 Billion in the period, the investments amounted to 11.6% of its GDP (Rosen & Thuringer, 2017, pp. 54–55; World Bank, 2021). Additionally, the FDI is largely concentrated in a handful of mineral extraction and infrastructure development projects. Although few in number, the royalties and taxes from any one of the mining projects would amount to a considerable proportion of Greenlandic administrations revenue. Each of them is therefore significant and will be covered in detail. Further, the infrastructure investments would likely indebt Greenland to China. Thus, the potential for China to gain leverage over the strategically significant island has caused concern in the United States.

So far, there have been four mining projects with different degrees of Chinese involvement. The oldest of these is the *Wegener Halvø* copper mining project, which was the first Chinese affiliated company to receive a mining licence in 2009 (Wallach, 2018). It was run in joint venture between a consortium dominated by the state-owned enterprise (SOE) Jiangxi Copper, and the UK based Nordic Mining (Jiang, 2018). Whether it is still in operation is unknown, however, as it does not appear in official documents. Another project, the *Isua* iron ore mine, has been owned by Hong Kong based General Nice Group since 2014, when the previous London-based owner went bankrupt (Greenland Ministry of Finance and Mineral Resources, 2015). Although the project was put on hold due to low prices of Iron, it was controversial in its time due to plans to bring in thousands of Chinese labours to construct the project. As the current immigration law was not considered adequate to deal with large scale immigration due to the mining operations, there were concerns that the low-paid Chinese expatriates would result in increased unemployment in the country. This is particularly so considering the impact that thousands of workers would have on a population of only about 56,000 (Ritzau, 2013). This controversy ultimately led to the collapse of the Greenlandic government at the time (Macalister, 2013). The third project is the *Citronen Fjord* zinc project. The exploitation rights are held by the Australian Ironbark Pty Ltd., which has appointed the China Nonferrous Metal Industry's Foreign Engineering and Construction company (NFC), a Chinese SOE, to develop the project and acquire dept financing from Chinese banks (Andersson et al., 2018, pp. 8–10; Ironbark Zinc Limited, n.d.; Mohr, 2020, pp. 118–125). Finally, perhaps the most controversial project is the *Kvanefjeld* rare-earth elements (REE), zinc and uranium project. The project was acquired in 2007 by an Australian based company, Greenland Minerals Ltd, which then partnered with two Chinese companies, NFC in 2014, and Shenghe Resources in 2016. Notably, both of these companies are

Chinese SOEs, although the latter is a provincial one (Jiang, 2018). These partnerships furthermore required that a majority of the REEs produced would be sent to China for further processing. Additionally, Shenghe Resources bought 12,5% of shares in Greenland Minerals (Andersson et al., 2018, pp. 9–11; Greenland Minerals LTD, 2018; Volpe, 2020).

The *Kvanefjeld* project became somewhat controversial due to the dual-use nature of both the REEs and the uranium that was to be extracted. The project site is estimated to be the world's second largest REE deposit. It is important to note that REEs can be considered a strategic resource, as they are important for a variety of both civilian and military technologies. Additionally, the global market for REEs is very imbalanced. China extracts more than 55% of the world's REEs, while also being the largest importer and accounting for 85% of the refinement and processing of the elements (Silberglitt, 2019; Williams, 2021). This has caused concern that it may choose to weaponize its market dominance, as it seemingly did with Japan in 2010 during a diplomatic dispute, leading recent U.S. administrations to press for decreased dependence on China (Jha, 2010; Subin, 2021). Thus, China's involvement in the *Kvanefjeld* project is likely driven by strategic resource considerations, similar to those that drive its investments in Russia (Mohr, 2020, pp. 123–124). The other notable element, uranium, is of course also dual-use due to its use in nuclear proliferation. The controversy related to uranium extraction was more domestic than international, with concerns raised about the mine's environmental impact in surrounding areas. In fact, this has led to the future of the mine coming into doubt. It became one of the main issues during an election in early 2021, which resulted in a government of two anti-nuclear parties which ran on a platform to refuse a licence to the project (Kilime et al., 2021; McGwin, 2021b).

In addition to the mining projects, China has also been involved in infrastructure development in the territory. There are two notable events that need to be considered here. One of these was a bid by the same company that owns the licence for the *Isua* iron project, General Nice Group. The bid was for an abandoned Danish naval base *Grønnedal* in south Greenland. The purpose for the acquisition is unknown, but some have speculated that the strategically important asset would make the company relevant to national security and might function as a bargaining chip with state authorities to help avoid prosecution and punishments related to financial and legal difficulties the group faced in Hong Kong (Lulu, 2018). In order to prevent a Chinese takeover of the base, the Danish government decided against the sale, officially stating that the base could still prove to be useful, despite previous statements otherwise by the Danish Ministry of Defence (Breum, 2018b; Sørensen, 2018, pp. 50–52). The other project which garnered Chinese interest was the expansion of two airports in *Ilulissat* and the capital city of *Nuuk*. It was the China Communications Construction Company (CCCC), a Chinese central SOE, which had been shortlisted for the infrastructure project. It is the largest in Greenland's history and was originally estimated to cost 3.6 billion danish crowns (DKK) (U.S \$560 million), but has since run into serious cost overruns (Bennett, 2018; McGwin, 2021a). Furthermore, the Export-Import Bank of China had also been slated as a potential financing partner (Jiang, 2018). It is notable that this is taking place in similar time frame as when the concept of the 'Polar Silk Road' was first announced by China. The Greenlandic administration estimated that it would need 1.5 billion DKK in additional financing to complete the project, amounting to roughly 7.8% of its GDP (Matzen & Daly, 2018; World Bank, 2021).

The infrastructure and development projects have been a cause of concern for the United States for a number of reasons. Most prominently, there is a concern that in the

case that the airport infrastructure is financed by loans from Chinese banks, that China may in the future seek to utilize that debt as a leverage against the Greenlandic administration, as form of economic power. U.S. administrations have often referred to this as ‘debt trap diplomacy’ or ‘predatory lending’ especially when discussing Chinese lending in Asia and Africa (Reuters, 2019). This has been one of the main U.S. criticisms against China’s BRI project, with the ‘Polar Silk Road’ project also receiving its share (Trellevik, 2019). That narrative implies that China is intentionally and premeditatedly indebting countries in order to gain strategic assets and potentially even military access. Although this narrative is most likely false (Acker et al., 2020; Jones & Hameiri, 2020), that doesn’t mean China’s actions are purely commercial and benign. A more nuanced take would argue that China instead casts a broad net in its financing activities and is then, after the fact, opportunistic in finding cases where debt might be used as potential leverage to advance other interests. As discussed briefly in the global-level analysis, this has been a prominent strategy employed by China elsewhere in the world. Furthermore, from the perspective of the United States, the intentions behind China’s activities are in fact irrelevant as they are ultimately unknowable (Mearsheimer, 2014, p. 31, see also discussion in theoretical section). Rather, its capabilities are what matter, here manifested as potential economic power over Greenland and, by extension, the Thule base and its BMD system (Mehta, 2018). Thus, the United States’ perception is based on the potential ramification of China’s involvement in Greenland, not its stated intentions. In this instance, China’s economic power over Greenland has the potential to jeopardize the U.S. presence on the island, as well as opening up the potential for enhanced Chinese presence in the future.

In that context, it is important to note that all the infrastructure and development projects which China is engaged in have some form of dual-use aspect. That includes the

mining projects. This is because of the remoteness of some of these projects, which necessitates the construction of large port facilities in order to transport the extracted minerals to the market (Greenland Minerals LTD, 2020, pp. 65–66; London Mining, 2013, pp. 16–17). These port facilities could be used to service warships, in case of future Chinese military operations in the Arctic (Rahbek-Clemmensen & Nielsen, 2020, pp. 79–81). Of course, the same would have gone for the *Grønnedal* naval base, had the bid for its purchase by General Nice Group been accepted. Although the airport projects were also dual use, meaning that the potential also applies there regarding future Chinese presence, the concern there was also related to their use for NATO operations. Specifically, the airports are considered vital for future Arctic military operations, including submarine tracking in the Arctic and the GIUK gap. Thus, there was also concerns regarding the involvement of a Chinese SOE with the expansion of a strategically vital airport, and whether the airport and its facilities would be compatible with NATO aircraft (McGwin, 2018).

China's economic leverage in Greenland could therefore have considerable implications. The United States fears that China's increased economic leverage there may influence how future Greenlandic administrations view their partnership with the United States and NATO, particularly in the event that island achieves independence (Rahbek-Clemmensen, 2019; 2020, pp. 79–81). In particular, the U.S. presence at Thule airbase may come into doubt. As discussed above, the radar station at the base is a vital part of the U.S. BMD system, while the base itself is also increasingly important due to its ability to host Arctic military operations. Thus, although it can be considered remote, the potential is there for China to erode the integrity of the United States' BMD system through its economic power. This is in addition to the potential for China to establish a military presence on the island through the use of the dual use infrastructure mentioned

above. This may seem like a relatively remote possibility, but what makes it so conceivable in the long run, and what has pressed the United States to react (Hinshaw & Page, 2019), is the sensitive political situation in Greenland which is caused by its push for greater autonomy and independence.

Greenland's quest for independence in the context of great power politics

The desire of Greenlanders for increased autonomy and ultimately independence has remained strong for a long period of time. Binding referendums on increased autonomy held in 1979 and 2009 both showed a strong desire for increased autonomy, with 70.1% and 75.5% in favour, respectively (Folketingsårbog, 1978/1979, p. 61; Nuttal, 2019, p. 93). Furthermore, in recent polls held in 2016 and 2019, 67% and 68% respectively favour an independent Greenland at some point in the future (DeGeorge, 2019, Grydehøj, 2020a, pp. 222-223). This was further reflected in the 2021 elections, where autonomy- and independence-oriented parties received 89.29% of the vote. However, a poll held in 2017 showed that this desire was not unconditional. Although that poll also found again 67% in favour of future independence, only 11% and 12% were respectively willing to accept a major or minor drop in living standards to achieve independence (Grydehøj, 2020a, pp. 222-223). It must also be further stressed that these figures all specifically refer to impence in the future, perhaps decades away. There is indeed little appetite among the electorate or politicians for independence in the short term.

Those economic concerns are also not unfounded, as Greenland is heavily dependent on Denmark financially. The current agreement which governs the relations between Denmark and Greenland is the 2009 *Self-government* agreement. Under the

rules of the agreement, Greenland receives a fixed annual block grant of 3.5 billion DKK (US\$514 million), adjusted with inflation, in addition to 1.2 billion DKK (US\$175 million) in other Danish state expenses. This amounts to a sizable 60% of its budget revenue or a third of its GDP. The agreement also details a path towards greater autonomy and a reduction of the block grant. Specifically, Greenland can take over fields of responsibility from Denmark, such as for example financial regulation or criminal law, but notably excluding foreign affairs, defence policy, and national security. The Greenlandic administration would however have to foot the costs associated with those fields. Regarding the block grant, the agreement stipulates that 50% of revenues from subsurface resource extraction exceeding 75 million DKK go towards its reduction. If the block grant is reduced to zero, negotiations would be initiated concerning future relations between Greenland and Denmark (Nuttall, 2019, pp. 92–96; Poppel, 2019, pp. 120–124; Act on Greenland Self-Government, 2009). In light of this, the Greenlandic administrations have sought to build up and diversify the territory's economy and seek investments in the mineral sector, as well as in tourism which is an increasingly promising sector. However, Greenland's remoteness and lack of infrastructure has hampered its development and dissuaded western investors, forcing it to look elsewhere. It was in this context that the Chinese investment offer in the vital airport infrastructure was made.

Fearing that Greenland might become saddled with Chinese debt and become susceptible to political leveraging, United States pressured Denmark to interdict and prevent Chinese involvement in the expensive airport projects. In a meeting in May of 2018 with the Danish Minister of Defense, Claus Hjort Frederiksen, the U.S. Secretary of Defense, Jim Mattis, made clear his concerns of Chinese financial involvement in Greenland, highlighting the militarization in the SCS as a warning of Chinese objectives

(Breum, 2018a). This was further established later that year when the U.S. Department of Defense released a Statement of Intent noting its intention to “strategically invest in projects related to airport infrastructure in Greenland, including projects that may have dual civil and military benefits” (U.S. Department of Defence, 2018). Prior to the meeting, Greenlandic officials had stated that the Danish government was unwilling to proffer any loans or finance for the projects. That changed sharply following the meeting, with Denmark offering terms described by Greenlandic officials as far better than the Chinese offer (Hinshaw & Page, 2019). Specifically, it offered to take a 33% equity stake in the enterprise which would own and run the airports, Kalaallit Airports, for \$109 million, in addition to \$140 million in both credit and state guaranteed loans (Reuters, 2018). Thus, it can be argued that, with the looming prospect of large-scale Chinese involvement in the Greenlandic economy, and the concerns expressed by the U.S. Secretary of Defense, it was obvious to Denmark that this could negatively affect its close security partnership with the United States. Therefore, it made the decision to intervene in the project and offer its own financing.

The airport negotiations from the perspective of Putnam’s two-level game model

To highlight the effects of China’s and the United States’ involvement, the negotiations surrounding the airport project can be analysed with reference to Putnam’s two-level game model. Prior to both the announcement of CCCC’s potential involvement in the project, and the meeting between the Danish and U.S. defence executives, there was no interest on behalf the Danish prime minister, or the parliament, of financially supporting Greenland’s airport infrastructure project (Ritzau Finans, 2018a; The Kingdom of Denmark, 2018). The view was perhaps well summarized by politicians of the small right-wing Danish Peoples Party, on whose support the reigning minority

government relied. They argued that the project would push Greenland towards an economic collapse, and that it simply represented another instance of Greenlandic politicians wastefully spending Danish money on pursuing independence (Grydehøj, 2020b, pp. 100–103). This contrasted with the Greenlandic government's position whose officials had previously sought Danish financing for the project. In essence, it was obvious to the two governments that the win-sets did not overlap and that no negotiations were justifiable.

However, this changed over a span of a few months. Following the announcements that the CCCC had been shortlisted for the airport construction, the Danish government was quick to react. The Danish prime minister at the time noted that this might have implications for foreign policy (Ritzau Finans, 2018b). With that, he implied that the infrastructure project might in part be subject to Danish central authority, as mentioned above. This was further compounded by U.S concerns expressed at the meeting between the countries' defence officials, following which came the Danish turn-around. A spokesperson for the Danish People's Party stated this outright, saying that the United States obviously didn't want China in Greenland and that "the government in Copenhagen has to stop the Chinese plans, because if it doesn't, the United States will" (Quoted in Matzen & Daly, 2018).

Thus, it can be argued based on the above that the involvement of China in the airport project, and the consequential U.S. pressure on Denmark, changed the preferences of the major actors in Denmark's 'level II' or ratification level, that being the parliament. Thus, preventing Chinese involvement in Greenland's economy weighed more heavily than the cost of financing the projects of Greenland's self-rule government. Furthermore, it can also be argued that this influenced the strategy of the Danish negotiators, that being the prime minister and his team. In particular, it can be argued that prior to this, the Danish

negotiators followed a strategy preferring a ‘no deal’ result over a ‘bad deal’ one. This changed with U.S. involvement, with the negotiators preferring any deal which would exclude China, even if it were otherwise a ‘bad deal’ (Fowler, 2017; Putnam, 1988, pp. 442–452). Of course, the Danish side still preferred a ‘good deal’ first and foremost and would press for that, but they were more willing to accept a worse deal. The Danish side were thus in a relatively disadvantageous position, being under pressure to come to an agreement, no matter what. These two factors resulted in the Danish win-set expanding towards the Greenlandic one, overlapping it and allowing for a negotiated agreement to be reached.

Regarding the Greenlandic side, the Danish financing was ultimately accepted, but the ratification was not without its issues. The day before the Danish prime minister and the Greenlandic premier were to meet in order to negotiate an agreement, the ruling coalition in Greenland broke down. Citing a lack of consultation on major decisions, and only hearing of the extent of the Danish involvement from the media (Elkjær, 2018), one of the parties to the governing coalition, the independence oriented Partii Naleraq, decided to withdraw from the coalition (Lihn, 2018). In particular, it was opposed to Denmark taking an equity stake in the project, arguing that it would lead to greater dependence on Denmark (Grydehøj, 2020b, pp. 100–103). Interestingly, the Greenland government did not immediately collapse. Instead, the main governing party managed to negotiate support for a minority government from a separate, pro-unionist party which had previously been in the opposition (Elkjær, 2018; Grydehøj, 2020a, pp. 224–228). The Greenlandic legislature then ultimately ratified the Danish financing proposal in late 2018 (Veirum & Lyberth, 2018). Thus, there seems to have been considerable asymmetries of information between the two levels on the Greenlandic side, opening up a possibility of an involuntary defection. I.e. due to lack of information about the position of the

supporting parties at the ‘ratification level’, the Greenlandic ‘negotiator’ came close to unintentionally renegeing on the deal. It is however also entirely possible that the premier knew that he could get the support of the opposition party, in case of a breakup of the governing coalition. Either way, it is probable that this further strengthened the Greenlandic hand in the negotiations, but that is difficult to verify without access to minutes of the meeting between the two negotiators.

But why then did Denmark not simply interdict in the project and unilaterally ban Chinese involvement? Although it would have been stretching the legal interpretations, Denmark could have argued that that Chinese involvement would affect Danish security, as well as involving foreign affairs, two fields of responsibility in which the Danish central government retains authority. The answer is that Denmark would likely risk pushing Greenland further away from Denmark and towards independence, or even towards dependence on other actors. Despite the financial burden of subsidization, Denmark accrues many benefits from Greenland’s subsumption under the Danish realm. During the Cold War, it benefited from the importance of Greenland to the United States and NATO in their rivalry with the USSR, as it was given more influence within the organization and was under less pressure to contribute elsewhere. Although the benefits were diminished after the cold war, it is likely that it will become an important factor once again with Greenland’s rising geostrategic importance in the face of NATO-Russia tensions and increased great power activity in the Arctic (Rahbek-Clemmensen & Nielsen, 2020, pp. 85–90; Takahashi, 2019c, pp. 38–42). Furthermore, without Greenland, Denmark would likely lose its influence and standing as an Arctic state, including its position on the Arctic Council (Nuttall, 2019, pp. 101–103; Poppel, 2019, pp. 121–123). Thus, even if there is now an expiration date on those benefits with Greenland’s continued moves towards independence, Denmark has an interest in sustaining Greenland’s

inclusion under the Danish realm for as long as possible. Additionally, it is possible a post-independence agreement could be reached, preserving some of Denmark's benefits. Therefore, Denmark does not wish to overextend its authority in fear of an inimical split. The pressure imposed on Denmark by the United States, due to the potential for Chinese involvement, thus put Greenland in a relatively advantageous, or even powerful, position vis-à-vis Denmark in the negotiations.

The discussion so far has highlighted the impact of great power competition upon the internal relations between Denmark and Greenland, but it is important to understand that Greenland played a very active role in involving itself in the on-going great power competition. Although Greenland does not have legal authority over its own foreign policy, there is considerable legal grey zone which allows for *paradiplomacy*, particularly so after the so-called Itilleq Declaration in 2003 where Denmark gave Greenland certain expanded rights and autonomy in its foreign affairs (Takahashi, 2019d, pp. 4–6, 2019b, pp. 131–135). This it has made use of in order to advance its goal of achieving financial independence. Indeed, the various Chinese investments in the country were in fact not an initiative by those companies or by China, but rather a response to intense efforts by Greenland to court Chinese investments. Notably, as early as 2004 the Greenlandic premier made an official state visit to China, in order to facilitate economic relations (“Enoksen til Kina,” 2005). Since then, Greenland has sent various official delegations to China, with the aim of courting investments, opening up market access and attracting Chinese tourists (Duus, 2012; Government of Greenland, 2016). Most pertinent to this discussion was however a large official trip made in late 2017 by the premier and three ministers to China, along with various business and enterprise leaders, including a representative from the airport enterprise, Kalaallit Airports. There, the notion of potential Chinese investments in the airport projects was brought up by the Greenlandic delegation,

as well as the possibility of CCCC bidding on the construction project the following year (Government of Greenland, 2017). Thus, although China has certainly been pushing investments in the Arctic under the umbrella of the 'Polar silk road', that's not to say that Greenland has acted as a passive receiver. Quite on the contrary, it has actively courted China and thereby involved itself in the on-going great power competition, intentionally or not.

By doing this, it has in a sense expanded its semi-internal relationship with Denmark to also include the United States and/or China. In a very interesting discussion on this topic (2019a, pp. 117–118) and on politics surrounding the Thule airbase (Takahashi et al., 2019), Takahashi posits that the involvement of other actors in the semi-internal relationship with its metropole, Denmark, changes the political dynamics between them. In particular, it moves from a static dyadic relationship to a far more dynamic triadic relationship, or even quadratic relationship. In those latter forms, Greenland can strengthen its position vis-à-vis Denmark by forming a direct relationship to a more powerful third actor, even becoming more powerful than Denmark in certain limited cases. This has been reflected here where Greenland involved China, and by extension the United States, in its relationship with Denmark and accrued numerous benefits. In essence, it utilized its own growing importance in the growing great power competition in the region to empower itself in relation to the central government in Denmark and extract concessions in the form of infrastructure financing. Not only did it gain more leverage over Denmark, but it also formed a better relationship with the United States, which has since followed up with closer cooperation in the mineral sector (U.S. Department of State, 2019), investments (Government of Greenland, 2020) and a more favourable deal for Greenland in hosting the Thule airbase (Greenland Ministry of Foreign Affairs, 2020). Greenland thus also enhanced its relationship with the United

States, capitalizing on its own growing importance in the context of China's increased activities in the Arctic and related tensions with the United States, as well as in the context of the increasing tensions between NATO and Russia in light of the latter's continued military build-up.

Conclusion

It is evident that not only does Greenland play a significant role in the great power competition in the Arctic region, but also that its semi-internal relations with the central government in Denmark has become increasingly intertwined with that of the relations between the great powers. Greenland's strategically vital location, as well as the established nature of the U.S. BMD system at Thule, have meant that it was almost unavoidable that it would become involved in the increasingly tense politics between China and the United States. Irrespective of whether China's involvement in Greenland was an intentional attempt at employing its economic power to undermine the integrity of the U.S. BMD system, or if it was mainly driven by interests in resource security, the fact that it had the capability of doing so meant that the United States was pressured to act. Further, this opportunity would not have presented itself, and the sequence of events surrounding the investments not been at all relevant, if Greenland had not been steadily moving towards independence and thus more susceptible to influencing and leveraging by China. In addition, Greenland played an active role in courting the investments which precipitated the U.S. reaction and pressure on Denmark, although it is very difficult to find any concrete evidence that its policymakers had any intention of doing so or forethought of those consequences. It is important to note that if the sequence of events was a result of cunning statesmanship on behalf Greenlandic politicians, their goals would likely be twofold. Beyond advancing Greenland's financial independence, this behaviour would likely also be aimed at extracting additional rents from Denmark, which benefits

from Greenland's strategic location. In answering the third research question then, it is argued that the second hypothesis, that in its pursuit of independence Greenland actively influenced the international politics of the Arctic, has been verified to a limited extent, although whether this was intentional or not is unknown.

Additionally, this research has also answered the second research question and found evidence to support the first hypothesis, that Greenland was empowered in its relations with Denmark due to the involvement of other actors. As was ascertained with reference to Putnam's two-level game model, the involvement of the large Chinese investments, and the consequent pressure which the United States exerted upon Denmark, resulted in the Danish side being disadvantaged in the negotiations and more willing to accept an otherwise unsatisfactory agreement. Given the Danish unwillingness to interfere too directly in Greenland due to their strong interests in maintaining the current state arrangements, it had little choice but to reach an agreement with Greenland. In short then, the U.S. pressure forced Denmark to accept an agreement it otherwise would not have. This was however by no means a given outcome, as was displayed by the Greenlandic negotiator's near miss with involuntary defection due to the collapse of the ruling coalition. It is unknown if the Greenlandic premier was certain that he had the required backing for the agreement and had already considered alternative coalition arrangements. Furthermore, it is unknown what would have happened had the negotiations fallen apart due to the Greenlandic administration losing its mandate, as the subsequent elections would have had considerable influence on the negotiations. But regardless, it is evident that the great power competition in the Arctic had considerable influence upon the semi-internal relationship between Greenland and Denmark.

Finally, in response to the first research question this research has shown that the Arctic region as a whole is also becoming more relevant to the increasingly tense relations

between the United States and China. In particular, China's bathymetric and hydro acoustic research activities are opening up the possibility of deploying SSBNs to the region in the future, which would significantly impact the nuclear balance of power between the two states. Furthermore, the region is playing an increasing role for China as a source of resources and energy security, decreasing its reliance on other, riskier sources and the straits which they pass through. In this, the work has highlighted the security aspects of Chinese investments in the Arctic. Although some of those investments do have commercial rationales, many of them do not. Those are thus better explained as instances of economic power, where China employs its economic wealth to limit the risks of its southern SLOCs and dissuade Russia from aligning against it, as but one example. Its infrastructure investments in Greenland, although now annulled, can be viewed in a similar light. The pressure that the United States placed on Denmark to prevent the investments substantiates the claim that the United States saw a very real threat in those investments, and that they had the potential to become a serious issue in the future. By reconceptualizing the role of power and capabilities within the framework in such a manner, this research additionally aimed to advance and contribute to the theoretical debates within the field of international relations.

There are many ways in which future research might build up on the topics discussed in this project. This includes building further on the above-mentioned reconceptualization, including by testing it on other cases where non-military power plays an important role in international politics. This does not have to be solely economic power either, as institutional and normative power could be incorporated as well, thus making the theoretical framework more comprehensive and holistic, without unduly diminishing its parsimony. The Arctic region would again prove a particularly fertile ground for such an analysis, due to the complex institutional governance arrangements which exist in the

region. Furthermore, future research might seek ways to explore the causal pathway examined here through more rigorous empirical means, the lack of which is perhaps one of the major limitations in the present research. Although this project extensively examined the causal pathway which links the global competitive relations to the local politics between a sub-national actor and its central government, it was somewhat limited in isolating clear causal effects between specific variables at each level. Thus, it may prove fruitful to focus on specific variables discussed here and seek ways to empirically test them between similar cases. Such variables may for example include the degree of economic or political involvement by a powerful third actor in the affairs of autonomous sub-national actors seeking greater autonomy from their central government.

References

- Acker, K., Brautigam, D., & Huang, Y. (2020). *Debt relief with Chinese characteristics* (Issue 39). <https://doi.org/10.2139/ssrn.3745021>
- Act on Greenland Self-Government, Pub. L. No. 473, Official State Bulletin (2009). <https://naalakkersuisut.gl/en>
- Aizhu, C., & Jaganathan, J. (2021, February 25). Update 2-Russia's Novatek in long-term LNG deal with China's Shenergy. *Reuters*. <https://www.reuters.com/article/russia-china-lng-idUSL1N2KV0CK>
- Ameyaw-Brobbe, T. (2020). Hegemonic theory is not dead: Regime survival and premature hegemonic war – Impact of China's economic rise on the international system. *Journal of Global Peace and Conflict*, 8(1), 13–25. <https://doi.org/10.15640/jgpc.v8n1a2>
- Andersson, P., Zeuthen, J. W., & Kalvig, P. (2018). Chinese mining in Greenland Arctic access or access to minerals? *Arctic Yearbook*, 7091, 1–15. https://vbn.aau.dk/ws/files/295149219/7_AY2018_Andersson.pdf
- AP News. (2020, September 10). *China, others to join military exercises in Russia*. <https://apnews.com/article/pakistan-belarus-iran-myanmar-russia-0d2f7ebbf673fccf3f2c643cc495a177>
- Ashford, E., & Kroening, M. (2020). Is this the beginning of a new cold war with China? In M. Kroening (Ed.), *Foreign Policy*. <https://foreignpolicy.com/2020/07/31/is-this-the-beginning-of-a-new-cold-war-with-china/>
- Auerswald, D. P. (2020). Arctic narratives and geopolitical competition. In J. Weber (Ed.), *Handbook on geopolitics and security in the Arctic* (pp. 251–273). Springer Nature Switzerland AG.
- Axyonova, V., Cenuşa, D., & Gawrich, A. (2020). International negotiations and domestic change in the EU's eastern neighborhood: Deconstructing antidiscrimination reforms in Moldova. *East European Politics and Societies*. <https://doi.org/10.1177/0888325420968911>
- Åtland, K. (2007). The introduction, adoption and implementation of Russia's "Northern Strategic Bastion" concept, 1992–1999. *International Journal of Phytoremediation*, 20(4), 499–528. <https://doi.org/10.1080/13518040701703047>
- Åtland, K. (2014). Interstate relations in the Arctic: An emerging security dilemma? *Comparative Strategy*, 33(2), 145–166. <https://doi.org/10.1080/01495933.2014.897121>
- Åtland, K. (2018). The building up of Russia's military potential in the Arctic region and possible elements of its deterrence. *CRS—Centre for Russian Studies*. http://r-studies.org/cms/index.php?action=news/view_details&news_id=43590&lang=eng
- Baldwin, D. A. (1993). Neoliberalism, neorealism and world politics. In D. A. Baldwin (Ed.), *Neorealism and Neoliberalism: The Contemporary Debate* (pp. 3–25). Columbia University Press.

- Bankes, N., & Madalena das Neves, M. (2020). The United Nations Convention on the Law of the Sea and the Arctic Ocean. In K. S. Coates & C. Holroyd (Eds.), *The Palgrave handbook of Arctic policy and politics* (pp. 375–392). Palgrave Macmillan.
- Barrett, J., & Ahlander, J. (2020, September 21). Exclusive: Swedish space company halts new business helping China operate satellites. *Reuters*.
<https://www.reuters.com/article/us-china-space-australia-sweden-exclusive-idUSKCN26C21L>
- Bartenstein, K. (2019). Between the Polar Code and article 234: The balance in Canada’s Arctic shipping safety and pollution prevention regulations. *Ocean Development and International Law*, 50(4), 335–362.
<https://doi.org/10.1080/00908320.2019.1617932>
- Beixi, D. (2018). Shipping Matters: The Role of Arctic Shipping in Shaping China’s Engagement in Arctic Resource Development. *Arctic Yearbook, Special Section: China & the Arctic*, 59–70.
- Bennett, M. M. (2014). North by northeast: Toward an Asian-Arctic region. *Eurasian Geography and Economics*, 55(1), 71–93.
<https://doi.org/10.1080/15387216.2014.936480>
- Bennett, M. M. (2018, September 13). The controversy over Greenland airports shows China isn’t fully welcome in the Arctic — yet. *Arctic Today*.
https://www.arctictoday.com/controversy-greenland-airports-shows-china-still-unwelcome-arctic/?wallit_nosession=1
- Bertelsen, R. G. (2020). Arctic security in international security. In G. H. Gjørsv, M. Lanteigne, & H. Sam-Aggrey (Eds.), *Routledge handbook of Arctic security* (pp. 57–68). Routledge.
- Beveridge, L., Fournier, M., Lasserre, F., Huang, L., & Têtu, P.-L. (2016). Interest of Asian shipping companies in navigating the Arctic. *Polar Science*, 10(3), 404–414.
<https://doi.org/https://doi.org/10.1016/j.polar.2016.04.004>
- Borgerson, S. G. (2008). Arctic meltdown. *Foreign Affairs*.
<https://www.foreignaffairs.com/articles/arctic-antarctic/2008-03-02/arctic-meltdown>
- Boulègue, M. (2019). Russia’s military capabilities in the Arctic managing hard power in a “low tension” environment. In *NDC Research Papers Series* (No. 4; Issue July).
- Boyd, H. (2019). *China’s army modernisation: progress, rhetoric and reality*. International Institute for Strategic Studies. <https://www.iiss.org/blogs/military-balance/2019/08/china-army-modernisation>
- Brady, A. M. (2017). *China as a polar great power*. Cambridge University Press.
<https://doi.org/10.1017/9781316832004>
- Breum, M. (2018a, June 30). How a dispute over China and Greenland’s airports worked its way toward a solution. *Arctic Today*.
<https://www.arctictoday.com/dispute-china-greenlands-airports-worked-way-toward-solution/>

- Breum, M. (2018b, December 20). Analysis: Did the Danish PM prevent a Chinese acquisition on Greenland? *High North News*.
<https://www.highnorthnews.com/en/analysis-did-danish-pm-prevent-chinese-acquisition-greenland>
- Breum, M. (2019, August 23). Why President Trump’s idea to buy Greenland is not a joke in Denmark and Greenland. *Arctic Today*. https://www.arctictoday.com/why-president-trumps-idea-to-buy-greenland-is-not-a-joke-in-denmark-and-greenland/?wallit_nosession=1
- Buixadé Farré, A., Stephenson, S. R., Chen, L., Czub, M., Dai, Y., Demchev, D., Efimov, Y., Graczyk, P., Grythe, H., Keil, K., Kivekäs, N., Kumar, N., Liu, N., Matelenok, I., Myksvoll, M., O’Leary, D., Olsen, J., Pavithran.A.P., S., Petersen, E., ... Wighting, J. (2014). Commercial Arctic shipping through the Northeast Passage: routes, resources, governance, technology, and infrastructure. *Polar Geography*, 37(4), 298–324. <https://doi.org/10.1080/1088937x.2014.965769>
- Butt, A. I. (2013). Anarchy and hierarchy in international relations: Examining South America’s war-prone decade, 1932-41. *International Organization*, 67(3), 575–607. <https://doi.org/10.1017/S0020818313000155>
- Buxbaum, P. (2016, October 31). Chinese investments to build new russian mega-port Arkhangelsk. *Global Trade*. <https://www.globaltrademag.com/chinese-investments-build-new-russian-mega-port-arkhangelsk/>
- Byers, M. (2017). Crises and international cooperation: An Arctic case study. *International Relations*, 31(4), 375–402.
<https://doi.org/10.1177/0047117817735680>
- Byers, M., & Lodge, E. (2019). China and the Northwest passage. In *Chinese Journal of International Law* (Vol. 18, Issue 1, pp. 57–90). Oxford University Press.
<https://doi.org/10.1093/chinesejil/jmz001>
- Carlson, J. D., Hubach, C., Long, J., Minter, K., & Young, S. (2013). Scramble for the Arctic: Layered sovereignty, UNCLOS, and competing maritime territorial claims. *SAIS Review of International Affairs*, 33(2), 21–43.
<https://doi.org/10.1353/sais.2013.0033>
- Cater, T., Carney, J., & Keeling, A. (2018). Mining and communities. In T. Bell & T. M. Brown (Eds.), *From science to policy in the eastern Canadian Arctic: An integrated regional impact study (IRIS) of climate change and modernization*. (pp. 495–508). ArcticNet.
- Chan, M. (2009, November 13). “Unforgettable humiliation” led to development of GPS equivalent. *South China Morning Post*.
<https://www.scmp.com/article/698161/unforgettable-humiliation-led-development-gps-equivalent>
- Chan, M. (2019, June 20). China’s BeiDou satellite navigation system breaks underwater barriers, naval shipbuilder says. *South China Morning Post*.
<https://www.scmp.com/news/china/military/article/3015265/chinas-beidou-satellite-navigation-system-breaks-underwater>
- Chater, A., Greaves, W., & Sarson, L. (2020). Assessing security governance in the Arctic. In G. H. Gjørv, M. Lanteigne, & H. Sam-Aggrey (Eds.), *Routledge*

- handbook of Arctic security* (pp. 43–56). Routledge.
- Checkel, J. T. (2012). Theoretical pluralism in IR: Possibilities and limits. *Handbook of International Relations*, 2, 220–241.
- Cheeseman, N., Lynch, G., & Willis, J. (2016). Decentralisation in Kenya: The governance of governors. *Journal of Modern African Studies*, 54(1), 1–35. <https://doi.org/10.1017/S0022278X1500097X>
- Chen, S. (2016, December 16). China launches its first fully owned overseas satellite ground station near North Pole. *South China Morning Post*. <https://www.scmp.com/news/china/policies-politics/article/2055224/china-launches-its-first-fully-owned-overseas-satellite>
- China Power Team. (2018, May 27). *How dominant is China in the global arms trade?* China Power. <https://chinapower.csis.org/china-global-arms-trade/>
- Chun, Z. (2020, January 9). China’s ‘Arctic Silk Road’ projects. *China Dialogue Ocean*. <https://chinadialogueocean.net/12569-chinas-arctic-silk-road-projects/>
- Colby, E. A., Denmark, A. M., & Warden, J. K. (2013). Nuclear weapons and U.S.-China relations. In *Center for Strategic & International Studies* (A Report of the Poni Working Group on U.S.- China Nuclear Dynamics). <https://doi.org/10.1080/00396337108441207>
- Council on Foreign Relations. (2020). *Timeline: U.S. relations with China 1949—2018*. Council on Foreign Relations. <https://www.cfr.org/timeline/us-relations-china>
- Culver, J., & Hass, R. (2021). Understanding Beijing’s motives regarding Taiwan, and America’s role. In A. Chorn (Ed.), *Brookings* (Taiwan-U.S. Quarterly Analysis). <https://www.brookings.edu/on-the-record/understanding-beijings-motives-regarding-taiwan-and-americas-role/>
- Dahl, R. A. (1957). The concept of power. *Behavioral Science*, 2, 210–215.
- Dahlburg, J.-T. (1987, October 2). Gorbachev calls for peace, cooperation in Arctic. *AP News*. <https://apnews.com/article/ed8452a6d9b7a62f5138a73a9de89432>
- Danish Defence Intelligence Service. (2020). *Intelligence risk assessment 2020* (Annual Risk Assessment). https://fe-ddis.dk/en/produkter/Risk_assessment/
- De Buitrago, S. R. (2020). China’s aspirations as a “near Arctic state”: Growing stakeholder or growing risk? In J. Weber (Ed.), *Handbook on Geopolitics and Security in the Arctic* (pp. 97–112). Springer Nature Switzerland AG.
- DeGeorge, K. (2019, January 22). *A rare poll hints at real differences between Danish and Greenlandic thinking on Greenland independence*. ArcticToday. https://www.arctictoday.com/a-rare-poll-hints-at-real-differences-between-danish-and-greenlandic-thinking-on-greenland-independence/?wallit_nosession=1
- DeVore, M. R., & Lee, S. (2017). APT(Advanced Persistent Treat)s and influence: Cyber weapons and the changing calculus of conflict. *The Journal of East Asian Affairs*, 31(1), 39–64. <http://www.jstor.org/stable/44321272>
- Dickson, B. J., Shen, M., & Yan, J. (2017). Generating regime support in contemporary

- China: Legitimation and the local legitimacy deficit. *Modern China*, 43(2), 123–155. <https://doi.org/10.1177/0097700416672419>
- Douglas, J. (2012). *Defensive realism and Chinese maritime strategy* [Victoria University of Wellington]. <http://hdl.handle.net/10063/2511>
- Durfee, M., & Johnstone, R. L. (2019). *Arctic governance in a changing world*. Rowman & Littlefield.
- Duus, S. D. (2012, November 2). Ove Karl igen til Kina [Ove Karl goes to China again]. *Sermitsiaq*. <https://sermitsiaq.ag/node/139618>
- Edelstein, D. M. (2002). Managing uncertainty: Beliefs about intentions and the rise of great powers. *Security Studies*, 12(1), 1–40. <https://doi.org/10.1080/09636410212120002>
- Elkjær, K. (2018, October 5). Overblik: Bent fra Måløv udløste tre ugers politisk kaos [Overview: Bent from Måløv unleashed three weeks of political chaos]. *Kalaallit Nunaata Radioa*. <https://knr.gl/da/nyheder/bent-fra-malov-udloste-tre-ugers-politisk-kaos>
- Enoksen til Kina i dag [Enoksen goes to China today]. (2005, May 23). *Kalaallit Nunaata Radioa*. <https://knr.gl/kl/node/144495>
- Erickson, A. S., & Collins, G. B. (2010). China's oil security pipe dream - the reality, and strategic consequences, of seaborne imports. *Naval War College Review*, 63(2), 89–112.
- Esper, T. M. (2020). *Implementing the National Defense Strategy: A year of successes* (Issue July). The United States Secretary of Defense.
- Exner-Pirot, H. (2020a). Between militarization and disarmament: Challenges for Arctic security in the twenty-first century. In L. Heininen & H. Exner-pirot (Eds.), *Climate Change and Arctic Security* (pp. 91–106). Palgrave Macmillan. <https://doi.org/10.1007/978-3-030-20230-9>
- Exner-Pirot, H. (2020b). The Arctic in international affairs. In C. Holroyd & K. S. Coates (Eds.), *The Palgrave handbook of Arctic policy and politics* (pp. 307–319). Palgrave Macmillan.
- Exner-Pirot, H., & Murray, R. W. (2017). Regional order in the Arctic: negotiated exceptionalism. *Politik*, 20(3), 47–64. <https://doi.org/10.7146/politik.v20i3.97153>
- Fahey, S. (2018). Access controll: Freedom of the seas in the Arctic and the Russian northern sea route regime. *Harvard National Security Journal*, 9, 154–200.
- Fearon, J. D. (1994). Domestic political audiences and the escalation of International disputes. *American Political Science Review*, 88(3), 577–592. <https://doi.org/10.2307/2944796>
- Flake, L. E. (2017). Contextualizing and disarming Russia's Arctic security posture. *Journal of Slavic Military Studies*, 30(1), 17–29. <https://doi.org/10.1080/13518046.2017.1271647>
- Folketingsårbog. (1968/1969). Copenhagen: J. H. Schultz Forlag. <https://www.folketingstidende.dk/ebog/19781R?s=II>

- Fondahl, G., Espiritu, A. A., & Ivanova, A. (2020). Russia's Arctic regions and policies. In K. S. Coates & C. Holroyd (Eds.), *The Palgrave handbook of Arctic policy and politics* (pp. 195–216). Palgrave Macmillan. https://doi.org/10.1007/978-3-030-20557-7_13
- Fowler, B. (2017, May 26). *Deal or no deal? A parliamentary Brexit vote and the two-level game*. Hansard Society. <https://www.hansardsociety.org.uk/blog/deal-or-no-deal-a-parliamentary-brexit-vote-and-the-two-level-game>
- Fravel, M. T. (2020). China's "world-class military" ambitions: Origins and implications. *Washington Quarterly*, 43(1), 85–99. <https://doi.org/10.1080/0163660X.2020.1735850>
- Galimullin, E., & Matveenko, Y. (2019). The ongoing formation of Russia's Arctic policy: a new stage? *Arctic Yearbook*.
- Garlick, J. (2018). Deconstructing the China-Pakistan economic corridor: Pipe dreams versus geopolitical realities. *Journal of Contemporary China*, 27(112), 519–533. <https://doi.org/10.1080/10670564.2018.1433483>
- Gasper, D. (2018, September 12). China and Russia want to develop Arctic energy resources together, and US disapproval may not deter them. *South China Morning Post*. <https://www.scmp.com/comment/insight-opinion/asia/article/2163719/china-and-russia-want-develop-arctic-energy-resources>
- Gavrilov, V. (2019). A perspective from the Russian federation. In R. W. Corell, J. D. Kim, Y. H. Kim, A. Moe, C. E. Morrison, D. L. Vanderzwaag, & O. R. Young (Eds.), *The Arctic in world affairs* (pp. 154–163). Korea Maritime Institute & East-West Center.
- Gazprom. (n.d.). *Power of Siberia*. Retrieved May 27, 2021, from <https://www.gazprom.com/projects/power-of-siberia/>
- Gelpern, A., Horn, S., Morris, S., Parks, B., & Trebesch, C. (2021). *How China Lends: A Rare Look into 100 Debt Contracts with Foreign Governments* (Issue March).
- Gjørsv, G. H., & Hodgson, K. K. (2019). "Arctic Exceptionalism" or "comprehensive security"? Understanding security in the Arctic. *Arctic Yearbook*.
- Glomsrød, S., Poppel, B., Lindholt, L., Duhaime, G., Lévesque, S., Holen, D., & Aslaksen, I. (2020). Arctic economies between geopolitical tensions and provision of livelihoods: Insights from the ECONOR approach. In J. Weber (Ed.), *Handbook on geopolitics and security in the Arctic* (pp. 207–229). Springer International Publishing. https://doi.org/10.1007/978-3-030-45005-2_13
- Goldstein, L. J. (2019, June). Chinese nuclear armed submarines in Russian Arctic ports? It could happen. *National Interest*. <https://nationalinterest.org/feature/chinese-nuclear-armed-submarines-russian-arctic-ports-it-could-happen-60302>
- Gosnell, R. (2020). The potential of polar routes: The opening of a new ocean. In J. Weber (Ed.), *Handbook on geopolitics and security in the Arctic* (pp. 193–207). Springer Nature Switzerland AG.
- Goswami, N. (2018). China in space: Ambitions and possible conflict. *Strategic Studies Quarterly*, 12(1), 74–97.

- https://www.jstor.org/stable/26333878?seq=1#metadata_info_tab_contents
- Goswami, N. (2020, July 1). The economic and military impact of China's BeiDou navigation system. *The Diplomat*. <https://thediplomat.com/2020/07/the-economic-and-military-impact-of-chinas-beidou-navigation-system/>
- Government of Greenland. (2016). *Qujaukitsoq til erhvervsfremstød i Kina [Qujaukitsoq goes for business promotion in China]*. https://naalakkersuisut.gl/da/Naalakkersuisut/Nyheder/2016/11/031116_Kina
- Government of Greenland. (2017). *Stor succes ved erhvervsfremstød i Kina [Great success with business promotion in China]*. <https://naalakkersuisut.gl/da/Naalakkersuisut/Nyheder/2017/10/311017-1Erhvervsfremstoed-i-Kina>
- Government of Greenland. (2020). *Project funds from the USA to Greenland*. https://naalakkersuisut.gl/en/Naalakkersuisut/News/2020/04/2304_civile_midler
- Graczyk, P. (2019). Challenges of Polar Code implementation: Compliance and Enforcement. In R. W. Corell, J. D. Kim, Y. H. Kim, A. Moe, C. E. Morrison, D. L. Vanderzwaag, & O. R. Young (Eds.), *The Arctic in world affairs* (pp. 192–202). Korea Maritime Institute & East-West Center.
- Greaves, W. (2019). Arctic break up: Climate change, geopolitics, and the fragmenting Arctic security region. *Arctic Yearbook*.
- Greenland Minerals LTD. (2018). *Memorandum of understanding signed with Shenghe for the commercialisation of the Kvanefjeld project*. <https://wcsecure.weblink.com.au/pdf/GGG/02011545.pdf>
- Greenland Minerals LTD. (2020). *Kvanefjeld project social impact assessment* (Issue December). <https://www.ggg.gl/community/public-consultation/sia/>
- Greenland Ministry of Finance and Mineral Resources. (2015). *New strong force behind London Mining Greenland*. <https://naalakkersuisut.gl/en/Naalakkersuisut/News/2015/01/080115-London-Mining>
- Greenland Ministry of Foreign Affairs. (2020). *Negotiations on the service contract at Thule Air Base have been concluded*. https://naalakkersuisut.gl/en/Naalakkersuisut/News/2020/10/2810_pituffik
- Grisons Peak LLP. (2020). China Outbound Investments Q2 2019. In *China Investment Research* (Volume 42).
- Grydehøj, A. (2020a). Government, policies, and priorities in Kalaallit Nunaat (Greenland): Roads to independence. In K. S. Coates & C. Holroyd (Eds.), *The Palgrave handbook of Arctic policy and politics* (pp. 217–232). Palgrave Macmillan.
- Grydehøj, A. (2020b). Unravelling economic dependence and independence in relation to island sovereignty: The case of kalaallit nunaat (Greenland). *Island Studies Journal*, 15(1), 89–112. <https://doi.org/10.24043/isj.101>
- Guzzini, S. (2009). On the measure of power and the power of measure in international relations (2009: 28; DIIS Working Paper).

- https://www.diis.dk/files/media/publications/import/extra/wp2009-28_measure_of_power_international_relations_web_2.pdf
- Haner, J., & Garcia, D. (2019). The artificial intelligence arms race: Trends and world leaders in autonomous weapons development. *Global Policy*, 10(3), 331–337. <https://doi.org/10.1111/1758-5899.12713>
- Hauksdóttir, G. R. Th. (2019, December 4). *Pressure in the Arctic: China-Iceland Relations with U.S-China Rivalry*. Institute for Security and Development Policy. <https://isdpr.eu/pressure-in-the-arctic-china-iceland-relations/>
- Heininen, L. (2019). Special features of Arctic geopolitics—A potential asset for world politics. In M. Finger & L. Heininen (Eds.), *The global Arctic handbook* (pp. 215–234). Springer International Publishing AG.
- Henriksson, A. K. (2020). The Arctic peace projection. In G. H. Gjørsv, M. Lanteigne, & H. Sam-Aggrey (Eds.), *Routledge handbook of Arctic security* (pp. 13–25). Routledge.
- Herrmann, V., & Hussong, L. O. (2020). No UNCLOS, No Icebreakers, No Clue? U.S. Arctic Policy Through the Eyes of Congress. In J. Weber (Ed.), *Handbook on Geopolitics and Security in the Arctic* (pp. 23–41). Springer Nature Switzerland AG.
- Hillman, J. E. (2020). China and Russia: Economic Unequals. In Center for Strategic & International Studies. <https://www.csis.org/analysis/china-and-russia-economic-unequals>
- Hindley, R. (2019a). Technological challenges for Arctic shipping. In R. W. Corell, J. D. Kim, Y. H. Kim, A. Moe, C. E. Morrison, D. L. Vanderzwaag, & O. R. Young (Eds.), *The Arctic in world affairs* (pp. 264–273). Korea Maritime Institute & East-West Center.
- Hindley, R. (2019b). The role of the Polar Code in Arctic maritime governance. In R. W. Corell, J. D. Kim, Y. H. Kim, A. Moe, C. E. Morrison, D. L. Vanderzwaag, & O. R. Young (Eds.), *The Arctic in world affairs* (pp. 182–192). Korea Maritime Institute & East-West Center.
- Hinshaw, D., & Page, J. (2019, February 10). How the Pentagon countered China's designs on Greenland. *The Wall Street Journal*. <https://www.wsj.com/articles/how-the-pentagon-counterred-chinas-designs-on-greenland-11549812296>
- Holroyd, C. (2020). East Asia (Japan, South Korea and China) and the Arctic. In K. S. Coates & C. Holroyd (Eds.), *The Palgrave handbook of Arctic policy and politics*. Palgrave Macmillan.
- Hudson, V. M. (2005). Foreign policy analysis: Actor-specific theory and the ground of international relations. *Foreign Policy Analysis*, 1(1), 1–30. <https://doi.org/10.1111/j.1743-8594.2005.00001.x>
- Hudson, V. M., & Day, B. S. (2020). *Foreign policy analysis: Classic and contemporary theory* (T. Crowell & D. Remsberg (Eds.); 3rd ed.). Rowman & Littlefield.
- Huebert, R. (2009). United States Arctic policy: the reluctant Arctic power. *University of Calgary, The School of Public Policy—University of Calgary Publications Series*, 2(2).

- Humpert, M. (2020a, January 23). China Looks to Further Its Arctic Role by Constructing Arc7 LNG Carriers. *High North News*.
<https://www.highnorthnews.com/en/china-looks-further-its-arctic-role-constructing-arc7-lng-carriers>
- Humpert, M. (2020b, December 8). China to launch satellite to monitor Arctic shipping routes. *High North News*. <https://www.highnorthnews.com/en/china-launch-satellite-monitor-arctic-shipping-routes>
- Iida, K. (1993). When and how do domestic constraints matter? Two-level games with uncertainty. *Journal of Conflict Resolution*, 37(3), 403–426.
<http://hjb.sagepub.com.proxy.lib.umich.edu/content/9/2/183.full.pdf+html>
- Ironbark Zinc Limited. (n.d.). *Citronen*. Retrieved June 1, 2021, from
<http://ironbark.gl/projects/greenland/citronen/>
- Ishikawa, Y., & Tabeta, S. (2021, January 6). Russia deepens China ties with expanded energy exports. *Nikkei Asia*. <https://asia.nikkei.com/Politics/International-relations/Russia-deepens-China-ties-with-expanded-energy-exports>
- Iwanek, K. (2019, November 19). *No, Pakistan's Gwadar port is not a Chinese naval base (just yet)*. The Diplomat. <https://thediplomat.com/2019/11/no-pakistans-gwadar-port-is-not-a-chinese-naval-base-just-yet/>
- Jåma, S., & Olofsson, D. (2019, January 15). Swedish security experts: We're too naive about China. *Sveriges Television*. <https://www.svt.se/nyheter/utrikes/swedish-security-experts-we-re-too-naive-about-china>
- Jervis, R. (1978). Cooperation under the security dilemma. *World Politics*, 30(2), 167–214.
- Jha, S. (2010, November). Did China overplay rare earth hand? *The Diplomat*.
<https://thediplomat.com/2010/11/did-china-overplay-rare-earth-hand/>
- Jiang, Y. (2018). China in Greenland. In *DIIS* (DIIS Policy Brief).
<https://www.diis.dk/en/research/china-in-greenland>
- Johnson-Freese, J., & Burbach, D. (2019). The Outer Space Treaty and the weaponization of space. *Bulletin of the Atomic Scientists*, 75(4), 137–141.
<https://doi.org/10.1080/00963402.2019.1628458>
- Johnson, J. S. (2018). China's vision of the future network-centric battlefield: Cyber, space and electromagnetic asymmetric challenges to the united states. *Comparative Strategy*, 37(5), 373–390. <https://doi.org/10.1080/01495933.2018.1526563>
- Johnson, N. (2020). Extractive energy and Arctic communities. In K. S. Coates & C. Holroyd (Eds.), *The Palgrave handbook of Arctic policy and politics* (pp. 97–117).
- Jones, L., & Hameiri, S. (2020). Debunking the myth of “debt-trap diplomacy”: How recipient countries shape China's Belt and Road Initiative. In *Chatham House* (Asia-Pacific Programme, Issue August).
<https://www.chathamhouse.org/publication/debunking-myth-debt-trap-diplomacy-jones-hameiri>
- Kaiser, B. A., Pahl, J., & Horbel, C. (2018). Arctic ports: Local community development issues. In N. Vestergaard, B. A. Kaiser, L. Fernandez, & J. N. Larsen

- (Eds.), *Arctic marine resource governance and development* (pp. 185–219). Springer International Publishing AG.
- Käpylä, J., & Mikkola, H. (2019). Contemporary Arctic meets world politics: Rethinking Arctic exceptionalism in the age of uncertainty. In M. Finger & L. Heininen (Eds.), *The global Arctic handbook* (pp. 153–171). Springer International Publishing AG.
- Karásková, I., & Blablová, V. (2021, March 24). The logic of China's vaccine diplomacy. *The Diplomat*. <https://thediplomat.com/2021/03/the-logic-of-chinas-vaccine-diplomacy/>
- Kaska, K., Beckvard, H., & Minárik, T. (2019). Huawei, 5G and China as a security threat. In *The NATO Cooperative Cyber Defence Centre of Excellence*. <https://ccdcoe.org/library/publications/huawei-5g-and-china-as-a-security-threat/>
- Keil, K. (2014). The Arctic: A new region of conflict? The case of oil and gas. *Cooperation and Conflict*, 49(2), 162–190. <https://doi.org/10.1177/0010836713482555>
- Khan, W. (2021, March 6). India's bet on Quad disrupts Russia's power play. *Nikkei Asia*. <https://asia.nikkei.com/Politics/International-relations/Indo-Pacific/India-s-bet-on-Quad-disrupts-Russia-s-power-play>
- Kilime, A., Broberg, H., & Pedersen, S. H. (2021, April 21). Jensen og Nielsen om ny koalitionsaftale: Hvor skal pengene komme fra? [Jensen and Nielsen regarding the new coalitiondeal: Where will the money come from?]. *Kalaallit Nunaata Radioa*. <https://knr.gl/da/nyheder/jensen-og-nielsen-om-ny-koalitionsaftale-hvor-skal-pengene-komme-fra>
- Kim, Y. H., Young, O. R., Corell, R. W., Kim, J. D., Moe, A., Morrison, C. E., & Vanderzwaag, D. L. (2019). Overview: Global-Arctic interactions—The Arctic moves from periphery to center. In Y. H. Kim, O. R. Young, R. W. Corell, J. D. Kim, A. Moe, C. E. Morrison, & D. L. Vanderzwaag (Eds.), *The Arctic in world affairs* (pp. 3–34). Korea Maritime Institute & East-West Center.
- Kirchberger, S. (2016). China's maritime security interests in the Arctic region: Military capabilities and possible intentions. In S. Bruns & A. J. Neumann (Eds.), *Kiel Conference 2016: Focus High North* (Issue June, pp. 34–45). Institute for Security Policy Kiel University. https://www.researchgate.net/publication/315642878_China%27s_Maritime_Security_Interests_in_the_Arctic_Region_Military_capabilities_and_possible_intentions
- Klimenko, E. (2019). The geopolitics of a changing Arctic. In *SIPRI Publications* (Issue December). <https://doi.org/10.5860/choice.26-2831>
- Koh, S. L. C. (2020, May 12). China's strategic interest in the Arctic goes beyond economics. *Defense News*. <https://www.defensenews.com/opinion/commentary/2020/05/11/chinas-strategic-interest-in-the-arctic-goes-beyond-economics/>
- Koivurova, T. (2011). Scramble for resources or orderly development: What is happening in the Arctic? In L. Salmela (Ed.), *Nordic Cooperation and the Far North* (pp. 1–13). Department of Strategic and Defence Studies.

- Koivurova, T., Kleemola-Juntunen, P., & Kirchner, S. (2020). Emergence of a new ocean: How to react to the massive change? In K. S. Coates & C. Holroyd (Eds.), *The Palgrave handbook of Arctic policy and politics* (pp. 409–426). Palgrave Macmillan.
- Koizumi, Y. (2019). Russia's military build-up in the Arctic. In M. Takahashi (Ed.), *The influence of sub-state actors on national security* (pp. 69–84). Springer Nature Switzerland AG.
- Korab-Karpowicz, W. J. (2018). *Political Realism in International Relations* (E. N. Zalta, Ed.). Stanford Encyclopedia of Philosophy; Metaphysics Research Lab, Stanford University. <https://plato.stanford.edu/entries/realism-intl-relations/#TwenCentClasReal>
- Korolev, A. (2016). Systemic balancing and regional hedging: China-Russia relations. *Chinese Journal of International Politics*, 9(4), 375–397. <https://doi.org/10.1093/cjip/pow013>
- Kossa, M. (2019). China's Arctic engagement: domestic actors and foreign policy. *Global Change, Peace & Security*, 1–20. <https://doi.org/10.1080/14781158.2019.1648406>
- Krasner, S. (1996). The accomplishments of international political economy. In K. Booth, M. Zalewski, & S. Smith (Eds.), *International Theory: Positivism and Beyond* (pp. 108–127). Cambridge University Press. <https://doi.org/DOI:10.1017/CBO9780511660054.007>
- Krieger, Z., & Roth, A. I. (2007). Nuclear weapons in neo-realist theory. *International Studies Review*, 9(3), 369–384.
- Kriz, Z., & Chrastansky, F. (2018). Existing conflicts in the Arctic and the risk of escalation: Rhetoric and reality. *Perspectives*, 20(1), 111–139. www.jstor.org/stable/23616259
- Kutty, S. N., & Basrur, R. (2021, March 24). The Quad: What It Is – And What It Is Not. *The Diplomat*. <https://thediplomat.com/2021/03/the-quad-what-it-is-and-what-it-is-not/>
- Lackenbauer, P. W., & Dean, R. (2020). Arctic exceptionalisms. In K. Spohr, D. S. Hamilton, & J. C. Moyer (Eds.), *The Arctic and world order: The question of future regimes to manage change* (pp. 327–355). Foreign Policy Institute.
- Lajeunesse, A. (2020). Arctic geopolitics and security from the Canadian perspective. In J. Weber (Ed.), *Handbook on geopolitics and security in the Arctic* (pp. 41–55). Springer Nature Switzerland AG.
- Lajeunesse, A., & Huebert, R. (2019). Preparing for the next Arctic sovereignty crisis: The northwest passage in the age of Donald Trump. *International Journal*, 74(2), 225–239. <https://doi.org/10.1177/0020702019849641>
- Lal, N. (2021, April 27). As US and China offer coronavirus aid, India wary of hidden agendas. *South China Morning Post*. <https://www.scmp.com/week-asia/health-environment/article/3131268/us-and-china-offer-coronavirus-aid-india-wary-hidden>

- Lambach, D. (2020). Cooperation in the cold: The Arctic search and rescue agreement. In J. Weber (Ed.), *Handbook on geopolitics and security in the Arctic* (pp. 273–291). Springer International Publishing AG.
- Lanteigne, M. (2021a, March 4). *Feedback loop: The voyage of the Christophe de Margerie (and its aftermath)*. Over The Circle. <https://overthecircle.com/2021/03/04/feedback-loop-the-voyage-of-the-christophe-de-margerie-and-its-aftermath/>
- Lanteigne, M. (2021b, March 12). The polar policies in China's new five-year plan. *The Diplomat*. <https://thediplomat.com/2021/03/the-polar-policies-in-chinas-new-five-year-plan/>
- Lassarre, F. (2018). Arctic shipping traffic: More ships will come, but not for transit. In T. Bell & T. M. Brown (Eds.), *From science to policy in the eastern Canadian Arctic: An integrated regional impact study (IRIS) of climate change and modernization*. (pp. 509–520). ArcticNet.
- Le Mière, C., & Mazo, J. (2013). *Arctic opening: Insecurity and opportunity*. Routledge.
- Lempinen, H. (2019). *Arctic energy and social sustainability*. Springer Nature Switzerland AG. <https://doi.org/10.1007/978-3-030-02269-3>
- Li, X. (2016). Applying offensive realism to the rise of China: Structural incentives and Chinese diplomacy toward the neighboring states. *International Relations of the Asia-Pacific*, 16(2), 241–271. <https://doi.org/10.1093/irap/lcv019>
- Liff, A. P., & Ikenberry, G. J. (2014). Racing toward tragedy? *International Security*, 39(2), 52–91. <https://doi.org/10.1162/ISEC>
- Lihn, A. G. (2018, September 9). Partii Naleraq har forladt koalitionen [Partii Naleraq has left the coalition]. *Kalaallit Nunaata Radioa*. <https://knr.gl/da/nyheder/partii-naleraq-har-forladt-koalitionen>
- Lindqvist, A. (2017, December 8). Nyt kinesisk satellitprojekt kører under radaren [New Chinese satellite drives under the radar]. *Sermitsiaq*. <https://sermitsiaq.ag/nyt-kinesisk-satellitprojekt-koerer-radaren>
- Lobell, S. E. (2017). Structural realism/offensive and defensive realism. *Oxford Research Encyclopedia of International Studies*, 1–24. <https://oxfordre.com/internationalstudies/view/10.1093/acrefore/9780190846626.01.0001/acrefore-9780190846626-e-304>
- Logan, D. (2020, September). The dangerous myths about China's nuclear weapons. *War On The Rocks*. <https://warontherocks.com/2020/09/the-dangerous-myths-about-chinas-nuclear-weapons/>
- London Mining. (2013). Social impact assessment for the ISUA iron ore project for London Mining Greenland A/S. In *Grontmij*. [http://naalakkersuisut.gl/~media/Nanoq/Files/AttachedFiles/Raastof/Hoeringer/ISUA 2012/SIA London Mining final march 2013.pdf](http://naalakkersuisut.gl/~media/Nanoq/Files/AttachedFiles/Raastof/Hoeringer/ISUA%202012/SIA%20London%20Mining%20final%20march%202013.pdf)
- Long, Z. (2019). A Chinese perspective on Arctic commercial shipping, in particular the Northern Sea Route. In R. W. Corell, J. D. Kim, Y. H. Kim, A. Moe, C. E. Morrison, D. L. VanderZwaag, & O. R. Young (Eds.), *The Arctic in world affairs*.

Korea Maritime Institute & East-West Center.

- Lulu, J. (2017, December 14). *Greenland: China discreetly launches satellite ground station project*. Wordpress. <https://jichanglulu.wordpress.com/2017/12/14/greenland-satellite/>
- Lulu, J. (2018). Confined discourse management and localised interactions in the Nordics. In *Sinopsis*. <https://sinopsis.cz/en/confined-discourse-management-and-the-prcs-localised-interactions-in-the-nordics/>
- Macalister, T. (2013). Greenland government falls as voters send warning to mining companies. *The Guardian*. <https://www.theguardian.com/world/2013/mar/15/greenland-government-oil-mining-resources>
- Mainardi, B. (2021). *Yes, China has the world's largest navy. That matters less than you might think*. The Diplomat. <https://thediplomat.com/2021/04/yes-china-has-the-worlds-largest-navy-that-matters-less-than-you-might-think/>
- Matzen, E., & Daly, T. (2018, March 22). Greenland's courting of China for airport projects worries Denmark. *Reuters*. <https://www.reuters.com/article/china-arctic-greenland/greenlands-courting-of-china-for-airport-projects-worries-denmark-idUSL4N1QP346>
- McGwin, K. (2018, September 19). US defense investments in Greenland infrastructure would keep NATO in, China out and Russia at bay. *Arctic Today*. <https://www.arctictoday.com/us-defense-investments-greenland-infrastructure-keep-nato-china-russia-bay/>
- McGwin, K. (2021a, February 18). Greenland's airport upgrade project braces for major cost overruns. *Arctic Today*. <https://www.arctictoday.com/greenlands-airport-upgrade-project-braces-for-major-cost-overruns/>
- McGwin, K. (2021b, May 10). Greenland's new government reiterates its opposition to uranium mining. *Arctic Today*. https://www.arctictoday.com/greenlands-new-government-reiterates-its-opposition-to-uranium-mining/?wallit_nosession=1
- Mearsheimer, J. J. (2001). *The tragedy of Great Power politics*. Norton.
- Mearsheimer, J. J. (2009). Reckless states and Realism. *International Relations*, 23(2), 241–256. <https://doi.org/10.1177/0047117809104637>
- Mearsheimer, J. J. (2010). The gathering storm: China's challenge to US power in Asia. *Chinese Journal of International Politics*, 3(4), 381–396. <https://doi.org/10.1093/cjip/poq016>
- Mearsheimer, J. J. (2013). Structural Realism. In T. Dunne, M. Kurki, & S. Smith (Eds.), *International Relations Theories: Discipline and Diversity* (pp. 77–94). Oxford University Press.
- Mearsheimer, J. J. (2014). *The tragedy of great power politics*. 2nd ed. W. W. Norton Company. <https://doi.org/10.1007/s11615-003-0090-4>
- Mearsheimer, J. J., & Walt, S. M. (2013). Leaving theory behind: Why simplistic hypothesis testing is bad for International Relations. *European Journal of International Relations*, 19(3), 427–457.

- <https://doi.org/10.1177/1354066113494320>
- Mearsheimer, J. J., & Walt, S. M. (2016). The case for offshore balancing: A superior U.S. grand strategy. *Foreign Affairs*, 95, 70–84.
- Mearsheimer, J. J. (2020, December 29). Joe Biden Must Embrace Liberal Nationalism to Lead America Forward. *National Interest*.
<https://nationalinterest.org/feature/joe-biden-must-embrace-liberal-nationalism-lead-america-forward-174928>
- Mehta, A. (2018, September 7). How a potential Chinese-built airport in Greenland could be risky for a vital US Air Force base. *Defense News*.
<https://www.defensenews.com/global/europe/2018/09/07/how-a-potential-chinese-built-airport-in-greenland-could-be-risky-for-a-vital-us-air-force-base/>
- Ministry of Foreign Affairs of Denmark. (2011). Denmark, Greenland and the Faroe Islands: Kingdom of Denmark strategy for the Arctic 2011–2020. In *Ministry for Foreign Affairs*.
- Mitrova, T. (2019). Arctic resource development: Economics and politics. In R. W. Corell, J. D. Kim, Y. H. Kim, A. Moe, C. E. Morrison, D. L. VanderZwaag, & O. R. Young (Eds.), *The Arctic in world affairs* (pp. 205–224). Korea Maritime Institute & East-West Center.
- Moe, A., & Schram Stokke, O. (2019). Asian Countries and Arctic shipping: Policies, interests and footprints on governance. *Arctic Review on Law and Politics*, 10, 24–52. <https://doi.org/10.23865/arctic.v10.1374>
- Mohr, J. (2020). China in the Arctic and the case of Greenland. In J. Weber (Ed.), *Handbook on geopolitics and security in the Arctic* (pp. 113–131). Springer Nature Switzerland AG.
- Morgenthau, H. (2008). Politics among nations. In K. A. Mingst & J. L. Snyder (Eds.), *Essential readings in world politics* (pp. 56–60). W. W. Norton Company.
- Morgenthau, H., & Thompson, K. W. (1948). *Politics among nations: The struggle for power and peace*. Alfred A. Knopf.
- Newlin, C., Conley, H. A., Viakhireva, N., & Timofeev, I. (2020). U.S.-Russia relations at a crossroads. In *Center for Strategic & International Studies*.
<https://www.csis.org/analysis/us-russia-relations-crossroads>
- Nilsen, T. (2020, May 27). New Barents Sea port and 500 km railway link could help connect Asia with the Arctic. *The Barents Observer*.
<https://thebarentsobserver.com/en/arctic/2020/05/new-barents-sea-port-will-get-railway-connecting-asia-arctic>
- Noguchi, K. (2011). Bringing realism back in: Explaining China's strategic behavior in the Asia-Pacific. *Asia-Pacific Review*, 18(2), 60–85.
<https://doi.org/10.1080/13439006.2011.640580>
- Nuttall, M. (2019). Greenland matters: In the crosscurrents of Arctic change. In R. W. Corell, J. D. Kim, Y. H. Kim, A. Moe, C. E. Morrison, D. L. VanderZwaag, & O. R. Young (Eds.), *The Arctic in world affairs* (pp. 89–107). Korea Maritime Institute & East-West Center.

- Nymand Larsen, J., & Petrov, A. N. (2020). The economy of the Arctic. In K. S. Coates & C. Holroyd (Eds.), *The Palgrave handbook of Arctic policy and politics* (pp. 79–97). Palgrave Macmillan.
- Olesen, M. R. (2014). Cooperation or conflict in the Arctic: A Literature Review. In *Danish Institute for International Studies* (No. 08; DIIS Working Paper).
- Østhagen, A. (2016). High North, low politics: Maritime cooperation with Russia in the Arctic. *Arctic Review on Law and Politics*, 7(0), 83–100.
<https://doi.org/10.17585/arctic.v7.255>
- Østhagen, A. (2020). The good, the bad, and the ugly: Three levels of Arctic geopolitics. In K. Spohr & D. S. Hamilton (Eds.), *The Arctic in world affairs* (pp. 357–378). Foreign Policy Institute/Henry A. Kissinger Center for Global Affairs, Johns Hopkins University SAIS.
- Otsuka, N. (2019). Japan's Arctic policy and observer status in the Arctic Council. In R. W. Corell, J. D. Kim, Y. H. Kim, A. Moe, C. E. Morrison, D. L. Vanderzwaag, & O. R. Young (Eds.), *The Arctic in world affairs* (pp. 358–384). Korea Maritime Institute & East-West Center.
- Pallardy, D. (2020, April 30). *Power of Siberia 2's new route makes Russian gas supplies to China more*. ICIS.
<https://www.icis.com/explore/resources/news/2020/04/30/10503185/gif-inside-story-power-of-siberia-2-s-new-route-makes-russian-gas-supplies-to-china-more-feasible>
- Palosaari, T. (2019). The Arctic paradox (and how to solve it): Oil, gas and climate ethics in the Arctic. In M. Finger & L. Heininen (Eds.), *The global Arctic handbook*. Springer International Publishing AG.
- Parnemo, L. K. (2019). Russia's naval development: Grand ambitions and tactical pragmatism. *The Journal of Slavic Military Studies*, 32(1), 41–69.
<https://doi.org/10.1080/13518046.2019.1552678>
- Petersen, N. (1998). Negotiating the 1951 Greenland defense agreement: Theoretical and empirical aspects. *Scandinavian Political Studies*, 21(1), 1–28.
<https://doi.org/10.1111/j.1467-9477.1998.tb00001.x>
- Petrov, A. N. (2019). Russia's Arctic policies: Historical legacies, current implementation, and international cooperation. In R. W. Corell, J. D. Kim, Y. H. Kim, A. Moe, C. E. Morrison, D. L. Vanderzwaag, & O. R. Young (Eds.), *The Arctic in world affairs* (pp. 52–61). Korea Maritime Institute & East-West Center.
- Pezard, S., Tingstad, A., & Hall, A. (2018). The future of Arctic cooperation in a changing strategic environment: Insights from a scenario-based exercise organised by RAND and hosted by NUPI. In *RAND*. <https://doi.org/10.7249/pe268>
- Pincus, R., & Berbrick, W. A. (2018, October). Gray zones in a blue Arctic: Grappling with China's growing influence. *War On The Rocks*.
<https://warontherocks.com/2018/10/gray-zones-in-a-blue-arctic-grappling-with-chinas-growing-influence/>
- Popescu, I. (2019). American grand strategy and the rise of offensive realism. *Political Science Quarterly*, 134(3), 375–405. <https://doi.org/10.1002/polq.12960>

- Poppel, B. (2019). The path toward independence. In R. W. Corell, J. D. Kim, Y. H. Kim, A. Moe, C. E. Morrison, D. L. VanderZwaag, & O. R. Young (Eds.), *The Arctic in world affairs* (pp. 120–132). Korea Maritime Institute & East-West Center.
- Priess, D., & Rasser, M. (2020, February 20). *Take Greenland seriously and literally as a vital national security issue*. Lawfare. <https://www.lawfareblog.com/take-greenland-seriously-and-literally-vital-national-security-issue>
- Putnam, R. D. (1988). Diplomacy and domestic politics: The logic of two-level games. *International Organization*, 42(3), 427–460. <http://www.jstor.org/stable/2706785>
- Rahbek-Clemmensen, J. (2019, August). Let's (not) make a deal: Geopolitics and Greenland. *War On The Rocks*. <https://warontherocks.com/2019/08/lets-not-make-a-deal-geopolitics-and-greenland/>
- Rahbek-Clemmensen, J., & Nielsen, L. J. (2020). The middleman—The driving forces behind Denmark's Arctic policy. In J. Weber (Ed.), *Handbook on geopolitics and security in the Arctic* (pp. 77–97). Springer Nature Switzerland AG.
- Ramsayer, K. (2020). 2020 Arctic sea ice minimum at second lowest on record. In *Climate Change: Vital Signs of the Planet*. NASA. <https://climate.nasa.gov/news/3023/2020-arctic-sea-ice-minimum-at-second-lowest-on-record/>
- Rathbun, B. C. (2007). Uncertain about uncertainty: Understanding the multiple meanings of a crucial concept in international relations theory. *International Studies Quarterly*, 51(3), 533–557. <https://doi.org/10.1111/j.1468-2478.2007.00463.x>
- Rej, A. (2021, March 6). US destroyer conducts FONOP in South China Sea. *The Diplomat*. <https://thediplomat.com/2021/02/us-destroyer-conducts-fonop-in-south-china-sea/>
- Reuters. (2018, September 11). *Greenland picks Denmark as airport project partner over Beijing*. <https://www.reuters.com/article/us-china-silkroad-greenland-idUSKCN1LQ2BX>
- Reuters. (2019, May 9). *China says "fed up" with hearing U.S. complaints on Belt and Road*. <https://www.reuters.com/article/uk-china-silkroad-usa-idUKKCN1SF0VQ>
- Rhode, B. (2019). The GIUK Gap's strategic significance. In *Strategic Comments* (Vol. 25, Issue 8). <https://doi.org/10.1080/13567888.2019.1684626>
- Riqiang, W. (2015). Limit missile defense - Or expand it?: A Chinese response. *Bulletin of the Atomic Scientists*, 71(2), 9–12. <https://doi.org/10.1177/0096340215571900>
- Ritzau Finans. (2018a). Løkke: Selvstændigt Grønland skal klare sig selv økonomisk [Løkke: An independent Greenland will have to rely on itself economically]. *Berlingske*. <https://www.berlingske.dk/oekonomi/loekke-selvstaendigt-groenland-skal-klare-sig-selv-oekonomisk>
- Ritzau Finans. (2018b, May 24). Løkke advarer Grønland mod at lade Kina bygge lufthavne [Løkke warns Greenland against letting China build airports]. *Fyens Stiftstidende*. [https://fyens.dk/artikel/loekke-advarer-gronland-mod-at-lade-kina-bygge-lufthavne-2018-5-24\(8\)](https://fyens.dk/artikel/loekke-advarer-gronland-mod-at-lade-kina-bygge-lufthavne-2018-5-24(8))

- Rosen, M. E., & Thuringer, C. B. (2017). Unconstrained foreign direct investment: An emerging challenge to Arctic security. In *CNA* (CNA's Occasional Paper Series, Issue November).
- Rothman, S. B. (2011). Revising the soft power concept: What are the means and mechanisms of soft power? *Journal of Political Power*, 4(1), 49–64. <https://doi.org/10.1080/2158379X.2011.556346>
- Roy, D. (2021, March). Rumors of war in the Taiwan Strait. *The Diplomat*. <https://thediplomat.com/2021/03/rumors-of-war-in-the-taiwan-strait/>
- Rudd, K. (2019, March 26). The convenient rewriting of the history of the “Quad.” *Nikkei Asia*. <https://asia.nikkei.com/Opinion/The-Convenient-Rewriting-of-the-History-of-the-Quad>
- Ruibal, A. (2018). Federalism, two-level games and the politics of abortion rights implementation in subnational Argentina. *Reproductive Health Matters*, 26(54), 137–144. <https://doi.org/10.1080/09688080.2018.1535687>
- Sachs, J. D. (2019). Will America create a Cold War with China. *China Economic Journal*, 12(2), 100–108. <https://doi.org/10.1080/17538963.2019.1601811>
- Sacks, S. (2021). China's military has a hidden weakness. *The Diplomat*. <https://thediplomat.com/2021/04/chinas-military-has-a-hidden-weakness/>
- Saitou, K. (2019). How have the U.S. interests in Greenland changed?: Reconstructing the perceived value of Thule air base after the Cold War. In M. Takahashi (Ed.), *The influence of sub-state actors on national security* (pp. 51–68). Springer Nature Switzerland AG.
- Schaller, B. (2020). The non-Arctic dimension of military security—Russia and the West between regional cooperation and geopolitical confrontation. In J. Weber (Ed.), *Handbook on geopolitics and security in the Arctic* (pp. 323–342). Springer Nature Switzerland AG.
- Schnapper, P. (2020). Theresa May, the Brexit negotiations and the two-level game, 2017–2019. *Journal of Contemporary European Studies*, 00(00), 1–12. <https://doi.org/10.1080/14782804.2020.1753665>
- Schofield, C., & Østhagen, A. (2020). A divided Arctic: maritime boundary agreements and disputes in the Arctic ocean. In J. Weber (Ed.), *Handbook on geopolitics and security in the Arctic* (pp. 171–191). Springer International Publishing. https://doi.org/10.1007/978-3-030-45005-2_11
- Schreiber, M. (2018, October 31). A new China-Iceland Arctic science observatory is already expanding its focus. *Arctic Today*. https://www.arctictoday.com/new-china-iceland-arctic-science-observatory-already-expanding-focus/?wallit_nosession=1
- Schultz, K. A. (1999). Do democratic institutions constrain or inform? Contrasting two institutional perspectives on democracy and war. *International Organization*, 53(2), 233–266. <https://doi.org/10.1162/002081899550878>
- Scobell, A. (2012). Learning to rise peacefully? China and the security dilemma. *Journal of Contemporary China*, 21(76), 713–721. <https://doi.org/10.1080/10670564.2012.666839>

- Scobell, A. (2018). The South China Sea and U.S.-China rivalry. *Political Science Quarterly*, 133(2), 199–224. <https://doi.org/10.1002/polq.12772>
- Screen, J. A., & Simmonds, I. (2010). The central role of diminishing sea ice in recent Arctic temperature amplification. *Nature*, 464(7293), 1334–1337. <https://doi.org/10.1038/nature09051>
- Shagina, M. (2020, January 10). Has Russia’s pivot to Asia worked? *The Diplomat*. <https://thediplomat.com/2020/01/has-russias-pivot-to-asia-worked/>
- Shaikh, F., Ji, Q., & Fan, Y. (2016). Prospects of Pakistan-China Energy and Economic Corridor. *Renewable and Sustainable Energy Reviews*, 59, 253–263. <https://doi.org/10.1016/j.rser.2015.12.361>
- Shepsle, K. A., & Weingast, B. R. (1987). The institutional foundations of committee power. *The American Political Science Review*, 81(1), 85–104. <https://doi.org/10.2307/1960780>
- Silberglitt, R. (2019). New and critical materials: Identifying potential dual-use areas. In *RAND* (Testimony Presented before the U.S.-China Economic and Security Review Commission on June 7, 2019). <https://doi.org/10.7249/ct513>
- Simes, D. J. (2020, August 24). “War Olympics” bring China and Russia closer as US tensions mount. *Nikkei Asia*. <https://asia.nikkei.com/Politics/International-relations/War-Olympics-bring-China-and-Russia-closer-as-US-tensions-mount>
- Simes, D. J. (2021, April 23). Chinese and Russian troops battle subzero chill in Siberia drills. *Nikkei Asia*. <https://asia.nikkei.com/Politics/International-relations/Chinese-and-Russian-troops-battle-subzero-chill-in-Siberia-drills>
- SIPRI. (2020). *Military expenditure by country as percentage of gross domestic product. 2020*, 1–14. [https://www.sipri.org/sites/default/files/Data for all countries from 1988–2019 as a share of GDP.pdf](https://www.sipri.org/sites/default/files/Data%20for%20all%20countries%20from%201988-2019%20as%20a%20share%20of%20GDP.pdf)
- Smith, S. A. (2021, May 27). *The Quad in the Indo-Pacific: What to Know*. Council on Foreign Relations. <https://www.cfr.org/in-brief/quad-indo-pacific-what-know>
- Snyder, G. H. (1996). Process variables in neorealist theory. *Security Studies*, 5(3), 167–192. <https://doi.org/10.1080/09636419608429279>
- Solakivi, T., Kiiski, T., & Ojala, L. (2019). On the cost of ice: Estimating the premium of ice class container vessels. *Maritime Economics and Logistics*, 21(2), 207–222. <https://doi.org/10.1057/s41278-017-0077-5>
- Soldatkin, V., & Astakhova, O. (2016, April 29). Update 2-Russia’s Yamal LNG gets round sanctions with \$12 bln Chinese loan deal. *Reuters*. <https://www.reuters.com/article/russia-china-yamal-idUSL5N17W2G8>
- Sørensen, C. (2018). China is in the Arctic to stay as a great power diplomacy plays into Kingdom of Denmark tensions. *Arctic Yearbook*, 1–11.
- Staalesen, A. (2017, March 14). Murmansk counts on Chinese investors. *The Barents Observer*. <https://thebarentsobserver.com/en/industry-and-energy/2017/03/murmansk-counts-chinese-investors>
- Staalesen, A. (2020, September 29). China’s new icebreaker completes first Arctic expedition. *The Barents Observer*.

- <https://thebarentsobserver.com/en/arctic/2020/09/chinas-new-icebreaker-completes-first-arctic-mission>
- Staun, J. (2020). A two-faced Russia? Civilian interests and great power politics in the high north. In J. Weber (Ed.), *Handbook on geopolitics and security in the Arctic* (pp. 3–22). Springer Nature Switzerland AG.
- Stefanovich, D. (2019, October 25). Russia to help China develop an early warning system. *The Diplomat*. <https://thediplomat.com/2019/10/russia-to-help-china-develop-an-early-warning-system/>
- Stokke, O. S. (2014). Asian stakes and Arctic governance. *Strategic Analysis*, 38(6), 770–783. <https://doi.org/10.1080/09700161.2014.952946>
- Stutter, R. (2018). China-Russia relations. In *The National Bureau of Asian Research* (NBR Special Report #73, Issue september).
- Subin, S. (2021, April 17). The new U.S. plan to rival China and end cornering of market in rare earth metals. *CNBC*. <https://www.cnbc.com/2021/04/17/the-new-us-plan-to-rival-chinas-dominance-in-rare-earth-metals.html>
- Takahashi, M. (2019a). An international relations perspective. In R. W. Corell, J. D. Kim, Y. H. Kim, A. Moe, C. E. Morrison, D. L. VanderZwaag, & O. R. Young (Eds.), *The Arctic in world affairs* (pp. 114–120). Korea Maritime Institute & East-West Center.
- Takahashi, M. (2019b). Conclusion: The political choices of sub-state actors and the politics surrounding U.S. military bases. In M. Takahashi (Ed.), *The influence of sub-state actors on national security* (p. 131). Springer Nature Switzerland AG.
- Takahashi, M. (2019c). Greenland's quest for autonomy and the political dynamics surrounding the Thule air base. In M. Takahashi (Ed.), *The influence of sub-state actors on national security* (pp. 25–50). Springer Nature Switzerland AG.
- Takahashi, M. (2019d). Introduction: The influence of sub-state actors on national security. In M. Takahashi (Ed.), *The influence of sub-state actors on national security* (pp. 1–10). Springer Nature Switzerland AG.
- Takahashi, M., Kawana, S., Saitou, K., Koizumu, Y., Hateruma, S., & Shimizu, A. (2019). *The influence of sub-state actors on national security* (M. Takahashi (Ed.)). Springer Nature Switzerland AG. https://doi.org/10.1007/978-3-030-01677-7_1
- Taliaferro, J. W. (2001). Security seeking under anarchy: Defensive realism revisited. *International Security*, 25(3), 128–161.
- Tétrault-Farber, G., & Reuters. (2020, June 15). Russia accuses Arctic scientist of treason, passing secrets to China. *Arctic Today*. <https://www.arctictoday.com/russia-accuses-arctic-scientist-of-treason-for-passing-secrets-to-china/>
- The Kingdom of Denmark, *Parliamentary Debates*, The Danish Parliament. (2018, January 19). Møde nr. 47 i salen, Forespørgsel nr. F 6: Forespørgsel til statsministeren om selvstændighedsprocessen i Grønland [Meeting nr. 47 in the hall, Inquiry nr. F 6: Inquiry to the Prime Minister on the independence process in Greenland] (Lars Løkke Rasmussen, Prime Minister) <https://mobiltv.ft.dk/video/20171/salen/47>

- The State Council of the People's Republic of China. (2018). *China's Arctic policy* (1st ed., pp. 1–10). The State Council Information Office of the People's Republic of China.
http://english.www.gov.cn/archive/white_paper/2018/01/26/content_281476026660336.htm
- The State Council of the People's Republic of China. (2019). *China's national defense in the new era*. The State Council Information Office of the People's Republic of China.
http://english.www.gov.cn/archive/whitepaper/201907/24/content_WS5d3941ddc6d08408f502283d.html
- Theocharis, D., Rodrigues, V. S., Pettit, S., & Haider, J. (2019). Feasibility of the Northern Sea Route: The role of distance, fuel prices, ice breaking fees and ship size for the product tanker market. *Transportation Research Part E: Logistics and Transportation Review*, 129, 111–135. <https://doi.org/10.1016/j.tre.2019.07.003>
- Tianming, G., & Erokhin, V. (2019). China-Russia collaboration in shipping and marine engineering as one of the key factors of secure navigation along the NSR. *Arctic Yearbook*.
- Trellevik, A. (2019, May 7). USA launches head-on verbal attack on Russia and China. *High North News*. <https://www.highnorthnews.com/en/usa-launches-head-verbal-attack-russia-and-china>
- Turnowsky, W. (2017, December 21). En særlig gruppe kinesiske turister [A peculiar group of Chinese tourists]. *Sermitsiaq*. <https://sermitsiaq.ag/node/202117>
- U.S. Coast Guard. (2019). *Arctic strategic outlook*. <https://www.uscg.mil/arctic/>
- U.S. Department of Defence. (2018). *Statement of intent on defense investments in Greenland*.
<https://twitter.com/usembdenmark/status/1041695240686632960?lang=en>
- U.S. Department of Defence. (2019a). *Military and security developments involving the People's Republic of China 2019* (Annual Report To Congress).
- U.S. Department of Defence. (2019b). Report to congress: Department of Defense Arctic Strategy. In *Office of the Under Secretary of Defense for Policy*.
- U.S. Department of Defence. (2020). *Military and security developments involving the People's Republic of China 2020* (Annual Report To Congress).
<http://www.ncbi.nlm.nih.gov/pubmed/26819042>
- U.S. Department of State. (2019). *Joint statement on U.S.-Greenland MOU and hyperspectral survey*. <https://2017-2021.state.gov/joint-statement-on-u-s-greenland-mou-and-hyperspectral-survey/index.html>
- U.S. Department of the Air Force. (2020). *Arctic strategy*.
<https://www.af.mil/Portals/1/documents/2020SAF/July/ArcticStrategy.pdf>
- U.S. Department of the Navy. (2021). *A blue Arctic*. <https://doi.org/10.1002/j.2161-4296.1950.tb00530.x>
- U.S. White House. (2021a). *Interim National Security Strategic Guidance*.
<https://www.whitehouse.gov/wp-content/uploads/2021/03/NSC-1v2.pdf>

- U.S. White House. (2021b, March 12). *Quad leaders' joint statement: "The Spirit of the Quad."* <https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/12/quad-leaders-joint-statement-the-spirit-of-the-quad/>
- United States Army. (2021). *Regaining Arctic dominance* (Chief of Staff Paper #3). <https://api.army.mil/e2/c/downloads/2021/03/15/9944046e/regaining-arctic-dominance-us-army-in-the-arctic-19-january-2021-unclassified.pdf>
- United States Government. (2018). *National Defense Strategy*.
- Vanak, J. T., Souders, J., & del Mazo, K. (2021, March 30). *How to operationalize the Quad*. The Diplomat. <https://thediplomat.com/2021/03/how-to-operationalize-the-quad/>
- Veirum, T. M., & Lyberth, J. (2018, November 15). Lufthavnsdebat: Koalitionen er klar til historisk beslutning [Airportdebate: The coalition is ready for a historic decision]. *Kalaallit Nunaata Radioa*. <https://knr.gl/da/nyheder/koalitionen-er-klar-til-historisk-beslutning>
- Volpe, M. (2020). The tortuous path of China's win-win strategy in Greenland. In S. Kopra (Ed.), *The Arctic Institute* (The Arctic Institute's China Series 2020).
- Vylegzhanin, A. N., Young, O. R., & Berkman, P. A. (2018). Governing the barents sea region: Current status, emerging issues, and future options. *Ocean Development and International Law*, 49(1), 52–78. <https://doi.org/10.1080/00908320.2017.1365545>
- Wallace, R. R. (2020). Canada and Russia in an evolving circumpolar Arctic. In K. S. Coates & C. Holroyd (Eds.), *The Palgrave handbook of Arctic policy and politics* (pp. 351–372). Springer International Publishing. https://doi.org/10.1007/978-3-030-20557-7_22
- Wallach, M. (2018). Ny rapport: Danmark og Grønland skal fastsætte tydelige regler over for Kina [New report: Denmark and Greenland must establish clear rules regarding China]. *Kalaallit Nunaata Radioa*. <https://knr.gl/da/nyheder/danmark-og-grønland-skal-fastsætte-tydelige-regler-over-kina>
- Waltz, K. N. (1959). *Man, the state, and War: A theoretical analysis*. Columbia University Press.
- Waltz, K. N. (1979). *Theory of international politics*. Addison-Wesley Pub. Co.
- Waltz, K. N. (1981). The spread of nuclear weapons: More may be better. *The Adelphi Papers*, 21(171), 1–1. <https://doi.org/10.1080/05679328108457394>
- Wang, Z. (2021, March 8). *Part II of select translations of 14th FYP (2021-2025) and Objectives through 2035*. Pekingnology. <https://pekingnology.substack.com/p/part-ii-of-select-translations-of>
- Weber, J. (2020). Limited cooperation or upcoming alliance? Russia, China and the Arctic. In J. Weber (Ed.), *Handbook on geopolitics and security in the Arctic* (pp. 345–364). Springer Nature Switzerland AG.
- Weidacher Hsiung, C. (2016). China and Arctic energy: drivers and limitations. *Polar Journal*, 6(2), 243–258. <https://doi.org/10.1080/2154896X.2016.1241486>
- Wezeman, S. (2016). Military capabilities in the Arctic: A new cold war in the high

- north? In *SIPRI Publications* (Issue October).
- Wiehle, S., Pleskachevsky, A., & Gebhardt, C. (2019). Automatic bathymetry retrieval from SAR images. *CEAS Space Journal*, *11*(1), 105–114.
<https://doi.org/10.1007/s12567-018-0234-4>
- Williams, C. A. (2021, February 26). China continues dominance of rare earths markets to 2030, says Roskill. *Mining.Com*. <https://www.mining.com/china-continues-dominance-of-rare-earths-markets-to-2030-says-roskill/>
- Wilson Rowe, E. (2020). Analyzing frenemies: An Arctic repertoire of cooperation and rivalry. *Political Geography*, *76*(September 2019), 102072.
<https://doi.org/10.1016/j.polgeo.2019.102072>
- Wintour, P. (2020). US v China: is this the start of a new cold war? *The Guardian*.
<https://www.theguardian.com/world/2020/jun/22/us-v-china-is-this-the-start-of-a-new-cold-war>
- Wiseman, M. S. (2020). The future of the Arctic Council. In K. S. Coates & C. Holroyd (Eds.), *The Palgrave handbook of Arctic policy and politics* (pp. 439–452). Palgrave Macmillan.
- Wohlforth, W. C. (2016). Realism and foreign policy. In S. Smith, A. Hadfield, & T. Dunna (Eds.), *Foreign policy: Theories, actors, cases* (3rd ed., pp. 35–54). Oxford University Press.
- World Bank. (2021). GDP (current US\$) - Greenland | Data. In *World Development Indicators*.
<https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=GL>
- Xinhua. (2018, July 29). China's 9th Arctic expedition team launches underwater glider in Bering Sea. *Xinhua*. http://www.xinhuanet.com/english/2018-07/29/c_137354532.htm
- Yagova, O. (2019, November 21). As Russia expands Pacific pipeline, a third of oil exports go East. *Reuters*. <https://www.reuters.com/article/us-russia-oil-exports-idUSKBN1XV1LB>
- Yang, Y., Mao, Y., & Sun, B. (2020). Basic performance and future developments of BeiDou global navigation satellite system. *Satellite Navigation*, *1*(1), 1–8.
<https://doi.org/10.1186/s43020-019-0006-0>
- Yang, Z. (2018, September 17). Vostok 2018: Russia and China's diverging common interests. *The Diplomat*. <https://thediplomat.com/2018/09/vostok-2018-russia-and-chinas-diverging-common-interests/>
- Young, O. R. (1992). *Arctic politics: Conflict and cooperation in the circumpolar north*. Dartmouth College Press.
- Young, O. R. (2019). Is it time for a reset in Arctic governance? *Sustainability (Switzerland)*, *11*(16). <https://doi.org/10.3390/su11164497>
- Zagorski, A. (2019). Impact of military security considerations on resource projects in the Russian Arctic. In R. W. Corell, J. D. Kim, Y. H. Kim, A. Moe, C. E. Morrison, D. L. Vanderzwaag, & O. R. Young (Eds.), *The Arctic in world affairs* (pp. 225–233). Korea Maritime Institute & East-West Center.

- Zeuthen, J. (2017). Part of the master plan? Chinese investment in rare earth mining in Greenland. *Arctic Yearbook*.
- Zhang, H. (2017). China's fissile material production and stockpile. In *International Panel on Fissile Materials* (Research Report No. 17).
<http://fissilematerials.org/library/rr17.pdf>
- Zhang, R., & Zhou, L. (2020, December 29). China-Russia ties won't be broken, declare Xi and Putin in signal to Biden. *South China Morning Post*.
<https://www.scmp.com/news/china/diplomacy/article/3115657/china-russia-ties-wont-be-broken-declare-xi-and-putin-signal>
- Zhao, M. (2019). Is a new cold war inevitable? Chinese perspectives on US-China strategic competition. *Chinese Journal of International Politics*, 12(3), 371–394.
<https://doi.org/10.1093/cjip/poz010>
- Zhao, T. (2020). Narrowing the U.S.-China Gap on missile defense: How to help forestall a nuclear arms race. In *Carnegie Endowment for International Peace*.
<https://carnegietsinghua.org/2020/06/29/narrowing-u.s.-china-gap-on-missile-defense-how-to-help-forestall-nuclear-arms-race-pub-82120>
- Zhou, O. (2021). *China's 2020 crude imports from US surge 211% to 396,000 b/d, valued at \$6.28 bil.* S&P Global.