Breaking the Ice: Testing the Application of the Geopolitical 'Shatterbelts'' to the Arctic Region

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Executive Summary

Characterising the space between the crush of two great powers has provoked lively scholarly debates on the nature of a shatterbelt. Yet the concept's usage has fallen out of use since the end of the Cold War and the collapse of bipolar global order, where almost every global region became a proxy battleground. However, rising geopolitical tensions amidst a rising China, more aggressive Russia and stagnating USA raises questions about the term's applicability in the modern era. In particular, the accelerating effects of climate change are irrevocably opening regions of the world to greater geopolitical contestation on the ground and revealing new incentives for great power's search for security.

The region most susceptible to climate change is believed to be the Arctic, with the irreversible loss of sea-ice, geological transformation and revelation of new resources and trade routes, as well as the negative spiral of warming releasing more carbon emissions. Among this backdrop stands an interesting debate: does the Arctic represent a new conceptualisation of shatterbelt theory, albeit one shaped by climactic and environmental factors more than ever. This thesis will crystalise the existing narratives and characteristics of shatterbelts, integrate climatic considerations and changes and apply this new framework to the Arctic by utilising interview responses and national security strategies by Arctic states. Whilst the Arctic is definitively not yet a shatterbelt even by the most basic definitions, the trend line is moving in the right direction, and with the Russian invasion of Ukraine kickstarting a new power dynamic, the chances of the Arctic's delineation from geopolitics ending seem high and the shatterbelt could become a more relevant tool for understanding a new raft of future geopolitically-locked regional tensions.

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Chapter I: Introduction

Russia's invasion of Ukraine in 2022 has arguably served as a wake-up call for NATO and the West, giving the alliance a renewed sense of purpose and could serve as a catalyst for a new 'Cold War', albeit one less governed by ideologies and more by direct interests and security objectives, as a well as one far less stable and less predictable when compared to the second half of the 20th century.

Amidst this potentially drastic u-turn in geopolitical polarity, questions arise regarding how 20th century and in particular, Cold War terminology, have applicability in today's geopolitical games. Chief amongst these terms is the term 'shatterbelt' or 'shatterzone'. First used during the inter-war period, it grew in popularity during the Cold War, as the two clearly defined ideological blocs (USA and Soviet Union) attempted to expand and solidify their position at the expense of the other. The term came to identify regions where great power contestation came to be characterised by a 'crush' or 'crumple zone' being created as the two power blocs converged, disfiguring and warping the political realities of actors in that specific region and making conflict far more likely.

The term has fallen out of popularity following the end of the Soviet Union. However, if we are truly returning to world order which has a semblance of bi or multipolarity (with the predicted rise of the EU as a hard power likely to balance the Russia-China bloc), then re-re-assessing the validity and applicability of the term with modern parameters is a necessary task to see if Cold War dynamics and the lessons learned from the 20th century have modern relevance, something which has not been engaged enough by existing literature.

The re-conceptualisation of modern geopolitics has also been driven by the impact of climate change. Up until now, classical geopolitical scholars viewed geography as fixed and determined. Yet, greater understanding of the spatially transient nature of geography and the overall environment has meant that theories and ideas that rest on that assumption must be adapted. Adapting the underpinning characteristics to be more climate-sensitive and less spatially deterministic is another focus of this research.

Considering climate change's impact on geopolitics, this thesis will apply a modified shatterbelt framework to a region historically delineated from geopolitical turbulence: The

Arctic. Despite the historic ‘negative peace’ brought about by unique geographical and climactic factors, climate change is irrevocably pushing the Arctic further into the bounds of great power contestation. Clearer navigation routes and easier access to the regions with an abundance of natural resources is likely to see powers ramping up economic and security activity in a race to establish dominance over these hugely lucrative opportunities and the power projection abilities its yields. Moreover, the Arctic is arguably the most dynamic of all global regions when it comes the geographical fluctuations and is the most impacted by climate change in terms of speed and change. Most historical positions on shatterbelt theory largely exclude the Arctic, again because of perceived assumptions about spatial determinism. With a warming polar region, little modern research has been devoted to explaining if the Arctic region qualifies, or whether it has the future potential to qualify for shatterbelt status.

To help investigate this issue in depth, the thesis will revolve around the following research question:

How well does the ‘shatterbelt’ description in geopolitical theory conceptually apply to the Arctic region amidst climate change?

Roadmap

This research will begin with a discussion over the pre-existing discourse around both the historical and current status of shatterbelts in academic literature, with the aim of identifying key characteristics that will form the backbone of the theoretical framework. Afterwards, discourse will also be conducted on the impact of climate change on geopolitical assumptions. A theoretical framework will then aim to integrate the core shatterbelt characteristics identified with the learnings from the discussion on climate change and geopolitics, with the result three climate-sensitive characteristics of shatterbelts that will serve the basis of this thesis’s application and analysis (Political Fragmentation, Strategic Geography and External Power Involvement).

Next, the research methodology and design will be articulated, covering validity, sampling and case selection, units of analysis and observation, risks and justification for the chosen method.

Afterwards, a brief discussion will be had on geopolitical status of the Arctic and the current positioning of primary and key Arctic national actors. Then the results from the interviews will be presented, with chapters afterwards applying qualitative analyses structured across the three characteristics drawn from the characteristics identified the theoretical framework. Results and responses will be assessed in relation to the new characteristics, with an understanding of how well they fit the respondents' views and whether there are key omissions/additions to make. Finally, the summaries of these analyses will be discussed in the concluding chapter, where the relevance of a climate-lens to shatterbelts, as well as the relevance of this term of the Arctic will be discussed.

The next chapter will review current literature around this subject.

Chapter II: Literature Review

Before setting up the analysis framework, it is necessary to do a stock take of how shatterbelt theory has developed historically and where it currently sits, to better help situate this research. This will then be followed by a discussion on how climate change has impacted geopolitical thinking, allowing for the synthesis of key learnings into the new framework that the next chapter will propose.

Shatterbelts

Whilst the term 'shatterbelt' did not become popularised in geopolitical circles until after World War II, its ideological underpinnings stem from the classical debates of geopolitics that shaped the inter-war environment in Europe. Shatterbelts were first theorised as a spin-off of the intellectual clash between the Harold Mackinder's 'Heartland' and Nicholas Spykman's 'Rimland' theories. Mackinder viewed the key to controlling the World Island or Eurasia, from a European perspective, was to dominate the Pivot Area (Eastern Europe). This zone contained contested and politically significant resources, trade route nexuses and vital strategic geography to allow for power projection at a time of brewing imperial and national sentiments across Europe; Eastern Europe was historically susceptible to getting caught in the middle of geopolitical competition between imperial Russia, Austro-Hungary, the Ottoman Empire and the German Empire in the 19th century and World War I (Mackinder 1943: 601). This area, trapped between the two power masses of the West and Soviet Union in the East during the Cold War, was characterised by nation states which were 'very diverse ethnically and politically, underdeveloped economically', a result of years of external powers politicking for position vis-à-vis strategic rivals, causing seismic political and social divergence and fragmentation through the region (Hensel & Diehl 1994: 34).

In contrast, more Amero-centric scholars saw the importance of controlling the rims or peripheral regions around Eurasia to generate global geopolitical domination, with the zones of contestation occupying crescents that surround the Eurasian Steppe, namelyc the Middle East, North Africa and later, South and East Asia (Spykman 1944: 41). This is included maritime domains and indeed Spykman was the first to recognise fracture zones within non-land based geography being key to securing international trade interests and limiting the

ability of strategic rivals from breaking out into unfettered global oceans; a driving consideration behind Britain's mastery of the sea in the 19th and early 20th centuries were designed in part to limit the French and German navies from establishing naval positions around the Eurasian Rimland, a similar strategy the British employed against the Russian Empire in their efforts to reach the Indian Ocean (Spykman 1944: 51). Whilst both fathers of geopolitics represented contrasting theoretical poles of thought at the time, both identify a key factor that would come to define shatterbelts; the fixation on political fragmentation between distinct state actors, often erupting into violent conflict.

The 'crush zone' was created by competing external influences as the fluctuating interests of great powers typically leads to the playing off or backing of regional actors (Fairgrieve 1941: 329). Fragmentation or fracturing occurs when the smaller states themselves develop distinct ideologies and cultures and begin to view each other as incompatible to their own beliefs and political positioning (Kelly 1986: 165). Typically, either this sees a group of states diverge away from there cooperative status quo or a grouping of distrustful states moving closer to violent conflict. This is often supported by uneven population distribution and higher economic inequality regionally, which further delineates each state from one another (Cohen 1973: 87, 252-256).

Conflict is highly likely to erupt given the mistrust and political distance between regional actors and is usually sparked by an arms race or another security dilemma. Additionally, shatterbelt regions are twice as likely to erupt into conflict than 'non-shatterbelt' regions (Hensel & Diehl 1994: 44). Moreover, conflict does not necessarily have to involve violence, the breakdown of cooperative frameworks and structures is sufficient; a movement from cooperation to mistrust without violence may also be construed as fragmentation because the term indicates a linear movement from one point of greater connectedness and interdependence to one which is less so (Reilly 2000: 56).

A large influence on the degree and vociferousness of political fragmentation is often around the nature of their location, often viewed as spatially determined i.e. they are finite and fixed in number due to their unchanging geographic, socio-economic and security importance; this forms the second characteristic. Eastern Europe was seen as the world's foremost shatterbelt region, predicated on its fixed location (Fairgrieve 1941: 331; Mackinder 1919: 158). Given

that the theatres of geopolitical conflicts were mainly concentrated in Europe at the time, this became the gold standard to define shatterbelts (Reilly 2000: 53).

Historical progression, and in particular the diffusion of global power during and after World War II and the beginning of decolonisation saw a conceptual rethinking of shatterbelt locations (Holmila 2020: 957). Building on Spykman's perception that fragmentation and wider zones of contestation happen at the fringes or rims of great power reaches, more and more space became devoted towards the Middle East. Its importance was 'because of (1) its use as a buffer [by Western Europe] against invasion from the east, (2) its status as a crossroads for trade between Western and Eastern Europe, the Near East, the Baltic and the Eastern Mediterranean, and (3) its economic value as an agricultural producer and a market for manufactured goods' (Hensel & Diehl 1994: 35; Whittlesey 1942: 171-172). This was based on perceptions that the Middle East as a nexus for West-East trade, transportation and power projection was fixed throughout history, yet the collapse of the Ottoman Empire helped create a conducive environment for political fragmentation and newness in state identity (Hartshorne 1941: 52).

The authors and scholars mentioned above all have a predisposition towards shatterbelts being definitive regions that cannot change. No new regions can become shatterbelts due to the fixed nature geography, evidenced by the fact that certain regions, have acted as nexuses for great power contestation for thousands of years. Regions were therefore defined in their fixed spatial characteristics, which made them consistent zones of competition and conflict (Hoffman 1952: 274). Shatterbelts only become 'stable' as they moved in and out of conflict and, depending on the waning and waxing of great power strength and other fluctuating conditionalities. The presence of innate geographic features (such as rivers, maritime chokepoints, valleys and mountain corridors) meant that regions had the underlying structural characteristic allowing them to move back into an active shatterbelt classification once the conditions became right (Hoffman 1952: 272-275; Cohen 1973: 85-87). This spatial fixation, however, has been undermined by the movement towards a conceptual reduction of space and the understanding that the geography that underpins these regions is fluid, especially with the entropic and linear progression of history (O'Tuathil & Agnew 1992: 191).

Technological advancements in travel and communication have effectively made most locations reachable in the world within 24-48 hours; a modern military such as the US's or

China could conceivably respond and even attempt to control regions and spaces far outside their traditional spatial proximity (Dijink 1996: 13). In addition to this, pre-Cold War theories were mainly based on conventional warfare, where the deployment of land-based armies were crucial for military strength and power projection (Venier 2011). The advent of naval and aerial warfare has meant that deploying these more long-range forms of military capabilities projects greater strength in a modern setting with lower dependencies on fixed land territories or proxies, especially in settings such as the Arctic, where fixed land is both limited and dangerous for pitched land warfare (Collins 1995: 1552). Climate change is another disruptive factor, as it has become our understanding that a) geography is not fixed but susceptible to change over longer periods of time and b) human-induced climate change has the potential to drastically alter geographical structures and features on far shorter timelines, meaning that political dynamics are subject to greater volatility in existential, environmental factors, which have to play a part in national leader's decision-making processes (Hommel & Murphy 2012: 507; Murphy & O'Loughlin 2009: 244).

Finally, the most critical and obvious characteristic is the nature of great power competition, namely two or more external states/blocs with substantial economic and military investment in the region, usually in pursuit of their own objectives. Much of this rests on the existence of bipolarity (or binary contestation) and the loose groupings that developed within the world order. The World Wars and convening inter-war period saw the consolidation of two power blocs, Axis and Allies, which were in conflict across all major theatres. The subsequent Cold War saw a clear bipolar world order develop, with almost all regions globally becoming proxy battlegrounds between American and Soviet interests (Hoffman 1952: 267). This global proxy war influenced theorists like Philip Kelly to view all regions as having the potential to be shatterbelts, given the true lack of fixed spatialisation and the growth of globalisation as a channel for more distant power projection (Kelly 1986: 175).

The appeal of great power involvement in a region stems from control of resources, especially energy sources like coal, oil and natural gas, in addition to the fact that a region occupies a strategic or vulnerable location relative to a great power's defensive or offensive ambition (Hoffman 1952: 266). Whether this be the USA's involvement in Middle Eastern conflict dynamics to sure up their energy supplies in the 1950s or the Cuban support (with the Soviet Union's backing) for Angola during the South African invasion in the 1970s in order to pushback against the receding of Communist interests in Southern Africa, the material or

security incentives which instigate involvement are heavily drawn from a leader's or leadership apparatus' perceptions of rewards and costs (Kelly 1986: 173).

One key issue of note is that most of the scholarship assessed in this literature review mainly focuses on the role of shatterbelts up until the end of the Cold War. Whilst the term may be in less frequent use, great power contestation and regional political fragmentation has continued to exist and indeed thrive in a non-bi-polar world (Venier 2011). Fragmentation has continued occur, especially in the shatterbelts of academic orthodoxy, such as the Middle East. The invasions of Iraq and Afghanistan by the United States to secure strategic resources and geographical objectives, as well as the more recent rise of an anti-Iranian alliance (including Israel and Sunni-dominated countries), in part encouraged by the USA, demonstrates that regional political fragmentation which is incepted or enhanced by external involvement is not a thing of the past (Boyd, Allen, Raines & Rajan 2020).

In a globalised age, where national interests are transboundary and often not materially or spatially locked, perceptions of interest by great power leadership only ratchets up. Non-involvement in a region is likely framed as an open door for a rival power to gain a foothold and thus shatterbelts become characterised by great powers pre-emptive involvement for fear of their rival's positioning. This perception fuels a security dilemma, with alliances and security agreements being formed with smaller states, reducing the number of states which occupy the 'middle ground' as well as the buffer zone, potentially further militarising the region and internationalising local conflict dynamics (Cohen 1982: 223).

From this discussion, three clear characteristics emerge when looking at common characteristics of shatterbelts:

1) High degrees of political fragmentation between distinct regional state actors
2) The occupation strategic geography that has economic, political and security importance
3) Economic and or military involvement of two or more external powers that contribute to the political fragmentation

This will act as a base for the theoretical framework, but before this can happen, a short discussion of how climate change has impacted geopolitical thinking is important, as the

learnings from this discussion can be applied to three characteristics to give a more climate-sensitive base to work off.

Climate Change in Geopolitics

Based on the previous section, we understand that shatterbelts applicability changes based on political changes, rather than geographical ones; this is a concept known as spatial determinism, or a belief that space is fixed and unchanging (Solis 2015). Classic geopolitical theorists such as Mackinder and Spykman did not consider the Arctic for example, as an important 'shatterbelt' for global power projection due to the presence of consistent sea ice, unnavigable ice shelfs and the extreme weather, which made it an almost non-factor in geopolitical considerations (Mackinder 1943: 601). However, the acceleration in awareness of climate change has helped remove the fixed conceptual thinking that geography is unchanging (Hommel & Murphy 2012: 507). With warming temperatures, ice-free seas and changing physical structures, environment is an influential variable on geopolitical thinking, which opens helps link regions of the world to geopolitical contestation (Dalby 2014: 7).

The melting of ice and rising sea levels in particular changes the access and long-term profitability of trade routes such as the North-East and North-West passages, meaning that the prospect of new opportunities and consequently pressures from competing actors, will likely push great powers into these new areas (Werrell & Femia 2015: 230). The melting of the icesheets in Greenland is likely to attract substantial external power interest, given the presence of key raw materials, which 10 years ago, would have been largely absent from great power considerations. This is likely to generate contestation and potentially even conflict, especially with much of the undiscovered resources being vital for the next generation of consumer and military technologies (Dams, van Schaik, & Stoetman 2020: 33).

Moreover, the effects of climate change are likely to manipulate the physical geography, including the shape of new waterways, chokepoints, islands and the structure and stability of the land itself. Less consistent ice on physical land means a greater ability to inhabit and militarise key islands (Heininen & Exner-Pirot 2020: 6). This makes them more important within great power considerations as they seek to control the strategic geography in order to enhance trade and power projection interests (Lavorio 2021: 120).

However, there is uncertainty as to what the impacts will be the tangible impacts climate change on geopolitical thinking and policy planning. Whilst there is an agreement that states can no longer base planning and strategy on historical estimations as accurately, the irony is that global warming could open access to traditional energy reserves like coal, oil and gas, just as the world is looking to move away from these sources towards renewable energy (Sosa-Nunez & Atkins 2017: 92). Additionally, predicting the tangible impacts of climate change is very tricky as it is difficult to estimate to what extent it will change the physical landscape in some regions (Dalby 2014: 5). Clearly, the literature over climate change's impact on geopolitics is contested and unclear. Whilst this is a risk to consider in the research process, the consensus is that climate change is changing the underpinnings and assumptions about the fixed nature of geography within geopolitical thought. The next chapter will integrate these findings into a theoretical framework.

Chapter III: Theoretical Framework

To recap the last chapter, three characteristics of shatterbelts were identified in the existing literature:

1. High degrees of political fragmentation between distinct regional state actors
2. The nature of shatterbelts occupying strategic geography that has economic, political and security importance
3. Economic and or military involvement of two or more external/great powers that contribute to the political fragmentation

The subsequent theoretical framework aims to incorporate the discussion in the last chapter on how climate change has impacted assumptions of geopolitical theory into the characteristics articulated above.

Political Fragmentation

Political fragmentation under existing shatterbelt literature typically focuses on the conflict and divergence between distinct nation states with the geographical region. The assumption is that shatterbelt locations are land-based, yet historical scholars do note the potential of maritime theatres to evolve into shatterbelts themselves (Spykman 1944: 17). This would likely bring greater powers into closer proximity, as great power projection has more access routes to achieve objectives at sea, where trade, transportation and sovereignty is more nebulous and difficult disconnect from interests (Dittmer, Moisio, Ingram & Dodds 2011: 203).

At sea, or in the absence of contiguous and substantial land masses, fragmented actors are the great powers themselves. For example, during World War II, the North Sea was considered a zone of contestation between the Allies and the German Navy. The lack of smaller land-fixed states meant that the fragmentation occurred directly on the fault lines between the great powers (Murphy & O'Loughlin 2009: 244; Kelly 1986: 167). The advent of climate change means that less consistent sea ice in the Arctic and more accessible transportation allow great powers to directly engage in the region, bypassing the need to rely on or play off smaller

regional states (KJ Reports 2019). Fragmentation in a region does not need smaller states to fracture; the opening of new regions thanks to climate change and the ability of great powers to engage in maritime power projection activities far from their territory, means that great powers can project power directly and not through conduits or proxies.

A final point to make is that climate change, especially in regions such as the Arctic, has acted as a motivator for cooperation, in order to adapt and mitigate to the worst effects. The mere fact that there has never been a full-scale violent conflict in the region, even despite the competition of nuclear powers globally, indicate that fragmentation maybe less distinguished by only violence (Boyd et al. 2020). In regions particularly susceptible to climate change, cooperation often exists with contestation (a cooperative-competitive framework), and as such detecting fragmentation needs to also consider the peaks and troughs of cooperation amidst similar waxing and waning of conflict, which as discussed in the literature review, does not necessarily need to be violent (Haverluk et al. 2014: 25). The subsequent definition that this thesis will work of are that shatterbelts have:

"High degrees of political fragmentation between distinct state actors".

Strategic Geography

Whilst it has been established that modern discourses on shatterbelts do move beyond spatial fixation, the discourses are still limited to the ability and speed at which the physical geography can change. Whilst a region may grow into a shatterbelt, assumptions are based on the presence of pre-existing and fixed strategic geographical elements such as chokepoints, that help frame a region's future geo-strategic profile (O' Tuathil & Agnew 1992: 193). However, climate change can create, change and destroy geographical features those geo-strategists have built their geopolitical assumptions, arguably with increasing speed (Dalby 2014: 7-8). In the last century, the decimation for example, of the Aral Sea, changed regional geopolitics, creating new chokepoints, strategic geographic features and divergent resource dispersion. Whilst induced by man-made actions such as diversion of rivers and destruction of native fauna, the impacts reflect rapid changes in the environment, reminiscent of human actions which contribute to global warming or sea level rises, albeit on a much shorter timeline.

Climate change is likely to reveal newer sources of energy, critical raw materials and offer new trade routes, as well key geographical features that will help or hinder power projection (Fawcett, Pearce & Ford: 2020: 5). Whilst shatterbelts do occupy strategic geography, the transformative nature of climate change means even regions or specific locations in a region which have yet to be considered strategic could grow in importance for national security planners. Geography within geopolitics is not stagnant or unchanging, and the fixed temporal spatial assumptions must change (Hommel & Murphy 2013: 518). An attempt to incorporate a region's potential to transform its geography into that worthy of strategic concerns should be integrated into the second characteristic:

"The nature of shatterbelts occupying established or changing strategic geography that has economic, political and security importance"

External or Great Power Involvement

The final characteristic identified in the literature review arguably requires the least change through a climate change lens. Shatterbelt literature has consistently focused on the role of external powers agitating tensions in the region to achieve wider geopolitical and security objectives (Cohen 1973: 86). As discussed with the first definitional character, climate change means that local or regional states do not have to be the frontlines of geopolitical conflict or fragmentation in a shatterbelt.

External powers, taking advantage of greater navigability and accessibility, can directly power project and involve themselves in the region without proxies (KJ Reports 2019). Whilst the presence of two or more great powers remains consistent with climate change literature, the dependency on local and regional proxies to be at the frontline of the fragmentation is likely to diminish, as the friction point moves away from regional states to the great powers, with the elimination of local fragmentation and state units being a necessary factor towards a sufficient one. Thus, the term 'external', becomes redundant. Consequently, the characteristic changes to:

"Economic and or military involvement of two or more competing powers that contribute to the political fragmentation or become the fault line of the shatterbelt itself"

Final Theoretical Remarks

Consequently, the three characteristics that will become the core of the theoretical framework, methodology and operationalisation are:

1) High degrees of political fragmentation between distinct state actors
2) The nature of shatterbelts occupying **established or changing** strategic geography that has economic, political and security importance.
3) Economic and or military involvement of two or more competing powers that contribute to the political fragmentation or become the fault line of the shatterbelt itself

This will be a good framework to apply as it aims to integrate climate change discourse into an area of geopolitics which has been historically stagnant to changing the underlying spatial assumptions. By placing shatterbelt theory within a climate frame, the possibilities as to what can constitute a shatterbelt and how likely a region is to develop into one can be more holistically assessed. The assumption that geography is fixed and unchanging is removed in favour of a more spatially nebulous and less physically locked characteristics, helping to assess the term's wider validity within a 21st century context.

The next chapter of the thesis will deal with the methodology and operationalisation of the research, outlining what type of study this thesis will follow, sampling and case selection, units of analysis and observation, method of analysis, validity and risks associated with the chosen method.

Chapter IV: Methodology & Research Design

Background of Design

This thesis took an interpretivist approach to research. Interpretivism is a research umbrella that aims to move beyond relying on a scientific approach to verifying data or a wider naturalistic direction. Research focuses on interpreting evidence through a qualitative manner to ascertain the nuances that might not be obvious from quantitative analyses, such as emotion and irrationality. Being an interpretivist approach, the thesis will be an explanatory one. This is due to the current characteristics of shatterbelts needing to integrate new developments, mainly from a climate change perspective, into the theory, to help set a new definitional paradigm.

To this end, the methodology utilised qualitative data collection tools. From a primary source perspective, the thesis used interviews with individuals, who have proximity to the topic, mainly from a think tank perspective. Two to three questions were asked per characteristic previously identified; the data will then be subject to a congruence analysis to assess the 'deduced expectations with empirical observations' (Blatter & Haverland 2012: 146). In order to triangulate the information gathered, the most recent published Arctic strategy from the eight Arctic states (and two 'Near Arctic actors' of the EU and China) were also subjected to a congruence analysis to determine the descriptive and explanatory strength of the three theoretical expectations. Triangulation through official policy documents helps add value to the national/bloc perspectives on the geopolitical situation of the region, versus a more helicopter view which purely interviews with think tank experts can provide.

Four semi- structured interviews were conducted. Interviews were a credible tactic for this topic as the research question aims to extrapolate and assess the validity of theoretical concepts, given the historically entrenched background of shatterbelt theories, versus twentieth-first century re-conceptualisations. Moreover, interviews offer subjective opinions on the topic and help shape understanding as to if and why these theories are relevant today, an extremely difficult task if one was to use primarily quantitative tools. Finally, having a semi-structured interview format allowed for participant responses to follow structure,

making it easier to compare perspectives, as well as giving them the ability to offer new avenues that might further diversify the research scope.

The interviewees are anonymised. This is since most are currently engaging in some form of consultancy or other work for national security agencies or organisations on the Arctic. This thesis wants to avoid any information being traced back to a single interviewee, risking their privacy and the sensitivity of their work. Moreover, given that the Arctic is a hotly contested zone now, there might be a general reluctance to dispel information which may be considered sensitive, as well as the presence of national bias, which may skew their responses, so offering anonymisation for all means less risk of insights being made publicly attributable, making them more comfortable in the interview to offer more tangible and in-depth perspectives. To confirm if they were comfortable with the interview design, verbal consent for interviews to be transcribed and for names to be anonymised was gained from all interviewees. Below is a reference of interviewees, with their most relevant professional affiliations:

Interviewee A: Senior Research Fellow on European Arctic Policy at the Clingendael Institute
Focus Areas: EU Foreign Policy, Arctic Resource Security, Climate Change

Interviewee B: Senior Fellow with the Polar Institute and the Environmental Change and Security Program at the Wilson Center and Center for Climate and Security
Focus Areas: US & Canadian Arctic Politics, Climate Security, Military Power Projection

Interviewee C: Research Professor at the Norwegian Institute of International Affairs
Focus Areas: Polar Geography, Russian Arctic Policy, Arctic Multilateral Cooperation

Interviewee D: Associate Professor at Peking University/University of Tromso
Focus Areas: Chinese Arctic Policies, Arctic economics, Maritime Power Projection

Interviewee Units & Sampling

The main unit of observation was the text and transcripts of individuals who are in think-tank or policy research positions that focus on the Arctic and/or geopolitics. Therefore, researchers in the middle of these two worlds (policy think tanks) offered an interesting middle-point or balance, given the thesis aims to apply a theoretical concept to a real-world situation. The interviewees occupy or have occupied professional roles at reputed policy think-tanks or related organisations.

The sampling selection of this research design was purposive sampling; this is where interviewees are deliberately chosen for their position or exposure to a certain topic or area. Given the risk of national bias that would exist with only policymakers, and the far distance from the on-the-ground developments that academic researchers are positioned relative to, policy researchers are in the best position to offer a blend of both a theoretical and practical insights, adding more layers to the analysis. Additionally, policy researchers with backgrounds in American, European, Russian and Chinese geopolitics were prioritised, in order to get a balanced perspective on the theory from the four key players in the region and eliminate cultural bias to an extent.

The unit of analysis was the concept of the shatterbelt. This is due to this thesis testing the applicability of the term to a case study and thus is the closest thing to a dependent variable this thesis has. Whilst nation states are also being observed, we are trying to make a conclusion about the concept of shatterbelts, not about singular and or a group of states behaviours or strategies.

The selection of the Arctic as this research's case study was because this region is not classed as a 'traditional' shatterbelt region yet is also the region most susceptible to climate change. The application of the theoretical framework here could open the application of shatterbelts to other the regions of the world, historically locked out of being defined as a shatterbelt due to fixed spatial or climactic factors. Finally, the Arctic is also experiencing geopolitical competition, that reflects the divisions more generally of current great power tensions and is therefore an interesting microcosm to reflect on the modern state of geopolitics and how it may play out in other regions under the current state of competition.

Themes

The themes are reflected in the three characteristics enumerated in the theoretical framework: political fragmentation, strategic geography, external great power involvement. These themes are heavily interrelated in the field of geopolitics, for example with external great power involvement in a region typically being linked with greater fragmentation between regional polities.

Interview Operationalisation

The interviews were semi-structured. The interviews ran up to 30 minutes, depending on the schedule and quality of answers. The interviewees were asked prior to interview whether they wish to consent to being interviewed, the handling of data by the interviewer and whether they are happy with the interview being recorded and transcribed for the analysis purposes. The interviewees will be anonymised for the reasons discussed previously.

The interviewer asked the interviewees two-three open-ended questions more generally about each characteristic/theme, allowing for the interviewee to add insight wherever they see fit. Given that the research question focuses on themes which are nebulous and interconnected, open-ended questions were important to allow room for expression, new viewpoints and linkages to be made, whilst keeping the interviewees responses focused on shatterbelts and away from less relevant discussion.

Triangulation of Interviews

As mentioned earlier, the most recent Arctic security policy documents from all classified Arctic states (Russia, USA, Finland, Norway, Iceland, Denmark, Sweden, Canada) were analysed, as well as China and the EU; these form the units of observation. The units of analysis were a) the presence of shatterbelt characteristics and b) the degrees of concurrence. Purposive sampling was the sampling method as there was a deliberate desire to compare the positions of littoral Arctic states, as well as the two most important ‘near’ Arctic actors in terms of economic and political engagement. These documents help offer national perspectives to how they view fragmentation, strategic geography and great power involvement in the Arctic, in contrast to the less-national bias of the think tank interviewees.

Getting a national perspective was also important as the practical application of this thesis is to condense a theoretical concept into a tangible framework and prediction that nation states may apply when developing their own Arctic strategies. The desire to look at each state's latest Arctic strategy as to ensure that the latest thinking from national capitals was incorporated into the analysis, rather than trying to understand a deeper historical progression, which has less relevance for analysing the current state of Arctic geopolitics.

One thing to note is that nation states, all have their own distinct strategy, which were all released at different times and were also unlikely to consider the very recent developments of Russia's invasion of Ukraine and the knock-on effects on the Arctic. Another issue is that given this thesis is mainly focusing on geo-strategy and security, one would want to analyse the Arctic policy of NATO, given that Canada, USA, Denmark, Iceland and Norway are all part of it and any statement from a military alliance maybe the better positioned to give a sense of how the Western allies view competition in the Arctic from a security lens. However, there is no single NATO Arctic strategy, so every nation state's individual Arctic policy was analysed. The EU's policy was also analysed as they are the main cooperative and economic grouping for three of eight Arctic states and independently the largest climate cooperation champion in the region, meaning many states refer to them for frameworks and coordination on climate action. Denmark is yet to release its new Arctic Strategy for 2021-30, their last strategy was published in 2011; for the purposes of this thesis, Denmark's latest 'Foreign and security policy strategy', published in January 2022, was used. Finally, the US has not released an Arctic strategy that integrates all security and political branches, and President Biden is yet to release his office's Arctic strategy (The Interim National Security Strategic Guidance document, released in March of 2021, does not even mention the Arctic once). The most recent strategy and the most time-relevant, is the US Army's strategy of 2021.

Interview Analysis

Once all the responses from the interviewees have been gathered, collated and transcribed, the research moved into an analysis phase.

The mode of assessment was Congruence analysis. This method of analysis aims to establish a degree of harmony or compatibility of a theory or concept to the observable evidence

(Blatter & Haverland 2012: 144). In this case, congruence analysis was not conducted to ascertain whether one theory better explains Arctic geopolitics, but rather to assess the validity of the established theoretical framework on the specific case of the Arctic. Congruence analysis is more generalisable however than other forms of analysis, as it aims to assess concept validity by focusing on the themes, tones and intellectual agreement or disagreement of the evidence to the theory (Blatter & Haverland 2012: 198).

The themes identified in the theoretical framework form the concepts (most abstract level) and the interview responses, as well as the policy documentation, form the indicators (most empirical level). Once all the interviews were transcribed a prediction matrix was created to visually compare the positions of the interviewees and see how many respondents aligned with each possible outcome. This allowed for an overall understanding of the congruence of the interviewees to the themes. It contains three general comments on the congruence of the interview respondents to each characteristic:

	Theme A	Theme B	Theme C
Broad Agreement [with characteristic]			
Somewhat Agreement/Changes need to be made			
Broad Disagreement			

Secondary-source analysis

The same method of analysis (congruence) was employed on the policy documentation. Whilst there may be references to a document's tone, wording and structure, these play less of primary role in the analysis and more of supporting one. Analysis focused on identification and relatability of themes and characteristics, with a matrix like the one shown above created to identify how states compare to one another, and for other, more generalised trends to evolve.

Bringing both primary and secondary research analysis together, each thematic chapter will aim to compare whether a) the themes are present in the Arctic geopolitical thinking on both a national and supra-national level and b) their validity.

Validity

It is important to establish the validity of this method. To do so, there are four distinct types of validity. First, concept validity, which is the connection between key concepts in theories and what the interviewees say. This was achieved as the interview questions builds directly on the three characteristics established in the theoretical framework. Furthermore, congruence analysis aims at assessing harmony between the concept (three characteristics of shatterbelts from the framework) and the indicators (interviewee data).

The second type of validity is construct validity, where the themes discussed in the framework and research designs are consistent into the measurement phases. The structure of the questions was directly linked to each topic. Moreover, the semi-structured nature allowed for a greater scope in answers outside the established themes of a specific question, however given the interrelated nature of the three themes, it will be hard for the interview responses to become misaligned, given the fact that any answers relevant to geopolitical competition and the Arctic will be relevant anyway to the scope of the question.

Internal validity aims to determine where the evidence predicted will support what the expectation is for the thesis's conclusions. The establishment of three characteristics gives the research a set of pseudo-hypotheses (not fixed predictions but markers to evaluate in the conclusion). There was a consistency in what was expected to occur from the interviewees, as the questions were framed based around the three characteristics, focusing the responses towards agreeing, disagreeing or enhancing them in the analysis and concluding chapters.

Externally, the validity of using the Arctic as a singular case study, whilst an exceptional geographic and climactic zone globally, is high as with climate change physically transforming the spatial remits, the lessons from this case study could be applied to other regions, previously locked out the shatterbelt definitions due to a lack of understanding about spatial transformation. Data subject to congruence analysis is more generalisable than other forms of qualitative analysis as the technique aims to establish the likeliness of a concept to

explain a case and how far the distance is between the reality and the expectation through a clear linear outline, with a degree of visualisation.

Risks

Whilst the proposed research method was effective for the interpretivist nature of the research questions, there were risks. The first one is with regards to gaining relevant insights, as this thesis was written during a period where physically speaking to experts was tricky due to the presence of the ongoing Coronavirus pandemic. Conducting digital interviews, whilst easier logistically, may have led to a less personal rapport being developed with the interviewee, limiting the researcher's ability to tease out insights which may only be offered with better personable engagement.

Moreover, accessing interviewees in a very sensitive field such as Arctic geopolitics was tricky due to issues of national security, especially if the experts were still directly involved in policy-setting. Additionally, ensuring a diverse set of respondents was difficult due to the same reasoning mentioned previously. The risk was that just focusing on the purposive sampling may limit the diversity in answers and accessing Chinese or Russian based authors was complex given language and political barriers; however this was compensated for by some of the interviewees being experts on Russian and Chinese Arctic strategies without being nationals or living there. Finally, there was a risk of personal bias, as this thesis's author searched and found all the interviewees, and the limited scope of either their network or overall access may have reduced the proper diversity of interviewees and subsequent responses.

The next chapter offers a short discussion on the state of Arctic geopolitics, before the subsequent chapters discuss the findings and analysis from the interviews and secondary source material.

Chapter V: Arctic Geopolitics Background

Arctic Exceptionalism

Whilst it was Mikhail Gorbachev who first used the term ‘exceptional’ to describe the Arctic, this exceptionalism has been a defining feature of its place in global geopolitics, especially throughout the Cold War (Gjørv & Hodgson 2019: 1). The enmity between the USA and USSR played out across the various theatres, such as Korea, Cuba, Iran, Afghanistan and Eastern Europe. However, the frozen barrier that the Arctic constituted meant that beyond the US maintaining Thule Airbase for monitoring and training purposes, as well as the Russians keeping the bulk of its naval forces based in the Sea of Murmansk, the region became a zone of ‘negative peace’, due to the limited power positioning potential (Cepinskyte & Paul 2021). The Arctic was not the zone of any major confrontation between the great powers during this period and thus, when the Cold War ended, ‘it was not difficult to foster cooperation in the region when tensions thawed’ (Gjørv & Hodgson 2019: 2).

The resulting three decades saw a large uptick in cooperation between the Arctic states. The 1996 Ottawa Declaration, which formed the Arctic Council (comprising of all 8 states mentioned above), was motivated in parts by falling levels of global contestation, as well as a rising understanding, amidst the sweep of liberal institutionalisation in the 1990s, that issues such as climate protection, international search and rescue and joint management of potential resources were all becoming larger than the singular capacities of individual states could handle independently (Cepinskyte & Paul 2021). This belief permeated into the Arctic Council’s mandate:

"The Arctic Council should not deal with matters related to military security" (Arctic Council 1996: 1).

Not focusing on military issues means that communications between disagreeing or even hostile members sees discussions diffused away from escalating tensions and de-lineating policymaking from security objectives. The Council has arguably been a net positive force for fostering good relations and maintaining a larger-than-the-sum-of-its-parts approach to managing Arctic stability, resources and the indigenous populations (Wehrmann 2020: 3).

Examples such as the 2015 Iqaluit Summit which established a communications infrastructure task force to manage transboundary communications is an example of a record of success, even despite growing geopolitical tensions between Russia and other countries over the invasion of Crimea (Arctic Council 2015). Other successes include programs to help reduce overfishing, helping to reduce catch loads down from 17 million to 8 million metric tonnes annually between 1967 and 2015 (Middlebury Institute of International Studies at Monterey 2020). The inclusive-actor approach of the organisation and the constant promotion of transboundary solutions in areas like Arctic wildfire management and monitoring the accessibility of future resources have helped make the Council the foremost policymaking body for the region (Wehrmann 2020: 10).

Cooperation has also been driven by a need to avoid an escalation of resource contestation, which might have spilled over into direct conflict. The region is home a treasure-trove of undiscovered resources and materials. Containing ‘13% (90 billion barrels) of the world's undiscovered conventional oil resources and 30% of its undiscovered conventional natural gas resources’ (U.S. Energy Information Administration 2012). Additionally, many precious metals such as nickel, palladium and zinc, vital for global supply chains and manufacturing, are present; 8% of all phosphates produced globally come from the Russian Arctic, with an estimated $1.5-2 trillion USD of critical raw material deposits in the Russian Arctic alone (Farré et al. 2014: 303; Rowe 2021). Such riches would be a pull for any nation, with a ‘scramble’ for resources occurring amidst accelerating warming in the region uncovering these materials (Dempsey 2019).

However, an integrative or ‘win-win’ approach has, up until recently, succeeded, with unsustainable resource exploitation remaining a less pressing or politicised issue when compared with other global regions due to fears that provoking conflict over resources would have devastating security consequences, as well as environmental (Wehrmann 2020: 4). For example, Russia and Norway signed the Maritime Delimitation and Cooperation in the Barents Sea and the Arctic Ocean, where discoveries of fossil fuels will be jointly developed and managed, with commitments to extraction caps. Additional transboundary initiatives such as the Arctic Council's Contaminant Action Program (ACAP) demonstrates a shared belief that environmental or resource-based risks, such as oil spills, contamination and exploration-linked seismic activity, threatening all states, forcing transboundary cooperation to adapt and mitigate.

This cooperative frame and the contest for resources has also had a knock-on effect on territorial disputes between member states. Despite the controversy surrounding the Russian placement of their flag under the North Pole (to claim the Lomonosov Ridge and its subsea resources as part of the Siberian Continental Shelf) in 2007, territorial tensions have been the exception rather than norm (Dittmer et al. 2011: 206). In 2010, Norway and Russia ended their dispute over demarcation in the Barents and Norwegian Seas (referenced above), as well as the Western Nansin Basin. In the same year, USA and Canada cooled their dispute in the Beaufort Sea. Even active disputes, such as that between Canada and Denmark over Hans Island are not subject to escalation or spill over into other bilateral issues.

With the continuing accessibility restrictions for transportation and exploitation of resources, states are seemingly not willing to escalate territorial disputes, even over the seabed/subsea regions. An additional factor which has played well into the hands of peaceful cooperation has been a desire to keep Arctic decision-making firmly within the realm of Arctic nations (Lavorio 2021: 119). Maintaining friendly relations inspite of wider tensions and trying to avoid geopolitical spill over has been a cornerstone of multilateral and bilateral relations and up until recently, meant that the Arctic not very conflict prone.

Climate Thawing versus Relational Freezing

This situation, whilst still relatively stable, has the potential to be up ended by the acceleration of climate change, and in particular, a warming of the Arctic environment. Temperature changes of only 1-2% could see the Arctic free of sea-ice year-round before the end of this century; the Arctic is heating up twice as fast as the rest of the world, and with annual declines in sea ice set to reach over 5% (Borunda 2020). Loss of permanent sea ice and the reduction of the Greenland ice shelf, a melting of permafrost and higher levels of CO2, all reduce the earth's ability to reflect excess heat and increase CO2 emissions from carbon trapped within these biomes. This all contributes to a worsening negative feedback loop, accelerating the warming beyond a tipping point. This point, once reached, will mean that the Arctic cannot regenerate itself and sea-ice coverage will be in constant decline (with temperatures consistently increasing annually), whilst also likely worsening or sparking a cascade of other climactic changes such as higher sea levels, rapid changes in currents and structural geological instability (Kertysova & Ramnath 2021).

Much of the impact of climate change on geopolitics has been discussed in the previous chapter. Yet, less consistent sea-ice and more navigable sea routes are opportunities for economic enhancement and political power projection. Less ice in general is likely to make accessing the undiscovered resources, especially in subsea regions, far easier (of an estimated 90 billion barrels of oil and 1670 trillion cubic feet of natural gas, 84% is estimated to be offshore) (Turunen 2020).

Additionally, with less sea ice, transportation routes such as the North-West and East passages can become more economically viable, with even the potential of even a passage over the true North pole towards the end of the century. In 2020 alone, almost 33 million tonnes of cargo made the journey through the Northern Sea Route (Staalesen 2021a). This is likely to spur Arctic nations to accelerate building out infrastructure and transportation capabilities in the region. Already, ice breaker ships are common, and Russia especially is using its geographical position across the emerging trade routes to control shipping, for example forcing ships that make the transit to be escorted by a Russian icebreaker (Russia has 50 for reference) (Lanteigne 2021). The latest Russian policy for the Arctic, the *Strategy for the development of the Arctic zone of the Russian Federation and ensuring national security for the period up to 2035*, has identified the need to build seaports in Indiga, Prevek and Provideniya to handle higher future volumes of cargo shipping (Russian Federation 2020). A more accessible Arctic is already spurring nations to get ahead of the competition and dominate Arctic trade infrastructure and navigation.

Finally, as the Arctic becomes warmer, military and defence power projection becomes more possible, raising the stakes of conflict or worsening other global security dilemmas, a relational freezing. A warming Arctic especially plays well into Russia's hands, given that most of their coastline, naval forces and energy installations sit within proximity of the Arctic Circle and Sea (Østhagen 2020). In 2019, Russian supersonic jets were able to successfully land on bases in Nova Zemlya. Both the Russian Military Doctrine (December 2014) and the Maritime Doctrine (July 2015) highlight 'specific military maritime security concerns, with a strong focus on the security of the bases and units of the Northern Fleet in the Arctic' (Russian Government 2015). New base constructions at Nagurskoye and on Franz Josef Island could be a deliberate attempt to expand Russian embeddedness in international activity regionally. With 81% of Russian nuclear warheads based in the Arctic Northern

Fleet, Russia's attempts to grow power projection should be a worry for the West and NATO (Seethi 2022).

Of even greater concern for the West in the very long-term may be the positioning of China as a 'near Arctic' state (Dams et al. 2020: 6). Since 2013 and the announcement of a Polar Silk Road, Beijing has become more assertive, through economics and diplomacy, in expanding interests in the region. The country is now an observer member of the Arctic Council, with Chinese icebreakers present regionally. Additionally, Chinese investment in airport infrastructure and REE mines in Greenland, as well as the level of investments and debt-ownership in Iceland, has created fears over more 'debt-trap' diplomatic tactics, designed in part to fragment Euro-Atlantic cooperation (Pelaudeix 2018: 2).

The US and European allies, even prior to Putin's invasion of Ukraine, have stepped up military activity in the region. The presidency of Donald Trump saw a breakdown of deconfliction activities such as the lapsing of the Anti-Ballistic Missile and the Intermediate-range Nuclear Forces Treaties, a public attempt to buy Greenland from Denmark for national security purposes and a more militarised Arctic doctrine, "Regaining Arctic Dominance". This was streamlined with Canada and Norway and calls for greater military readiness and increased investments in cold-weather specialist training and a larger and more permanent NATO presence (Seethi 2022; United States Army 2021: 10).

President Biden's administration has attempted to maintain the more militarised and security-focussed approach to the Arctic of his predecessor, at least in rhetoric and in ambition. The establishment of a dedicated Arctic security centre in the Pentagon, more marine training for cold-weather combat and the deployment of new generation air strike fighters, the F-35B, to Alaskan airbases have substantially ratcheted up the tensions in a growing tit-for-tat display of force (O'Connor & Jamali 2022; United States Army 2021: 30-44). Finally, NATO in 2022 announced two new military exercises in addition to Cold Response, Brilliant Jump and Northern Viking, which could provoke Moscow even more amidst the Ukraine crisis. The greater accessibility and power projection opportunities brought about by climate change is seemingly leading all sides into a new security dilemma (O'Connor and Jamali 2022).

This is yet to even consider the recent developments in Ukraine. Whilst the Arctic has historically been exempted or delineated from the spill over effects of great power

confrontation, Putin's invasion of Ukraine could raise the growing risk of a security dilemma or even the conflict spilling over into a new theatre (Harvey 2022). All other full members of the Arctic Council have halted their participation in the organisation, a more salient move given the rotating Russian presidency of the body. The global trend of institutions to either suspend or eliminate Russian participation is likely to stretch to the Arctic and due to Russia's outsize exposure, could weaken or even end any hopes of transboundary cooperation. This pause would not only put at risk the environmental concerns, but also eliminate a safe space for deconfliction and increase the risk of miscalculation (Harvey 2022).

With Putin's behaviour more and more following that of an autocrat with limited concern for the wider social and economic context, and the West determined to isolate Russia, there are fears that this new, less ideological and less rational, 'Cold War' could end Arctic exceptionalism and see the region become a fault line in future conflicts. Whilst both sides are unlikely to be drawn into a full nuclear war, conflict brings miscalculation and the substantial Russian nuclear presence will only ramp up the West's anxiety. This might likely spur further power projection attempts (more NATO exercises and permanent installations), risking pulling the Arctic in.

This is the setting which this analysis will be framed in. The subsequent chapters will discuss the findings from the interviews in detail and analyse them with this brief context in mind.

Chapter VI: Initial Results

Broadly speaking, the results from the primary and secondary data sources reveal, at the very least, a coalescence in either recognition or degrees of agreement with the three definitions or factors articulated in the theoretical framework. Below is the congruence analysis matrix that displays the position of the interviewees:

Table 1: Interviewee Congruence Matrix

	Theme A - Fragmentation	Theme B – Strategic Geography	Theme C – Great power competition
Broad Agreement	C, D	A, B, C, D	A, D
Somewhat Agreement/Changes need to be made	A, B		B, C
Broad Disagreement			

The first point to make is that all the interviewees aligned with the idea that strategic geography and the control of it is applicable in the Arctic in the context of shatterbelts. This view was typically differentiated between control of resources (hydrocarbons, raw materials, minerals) and trade routes that are emerging in the Arctic. Interviewees typically were more confident on the growth and acceleration of competition around the control of resources, citing the current energy crisis, war in Ukraine and the salience of climate change ending delineation with geopolitical tensions.

Regarding control of trade routes, interviewees were more mixed in their views. Some, interviewees, A & B, were quite clear that for countries like Russia and Canada, given the proximity of these routes to their sovereign waters, control and oversight was heavily tied to their national priorities in the region (Interviewee A 2022; Interviewee B 2022). Other interviewees, C & D, were more hesitant on the importance of routes. This was especially relevant in the near-to-medium term, given that many of the routes were not navigable year-round (Interviewee C 2022; Interviewee D 2022). Therefore, views were more mixed on this

specific aspect, yet the importance of strategic geography was the theme of greatest consensus.

The growth of great power competition in the Arctic, especially through economic and military build-up was also a factor that saw a degree of convergence, however there was more contestation between the interviewees, especially over the extent to which military build-up can happen going forward. On the economic side, there was near unanimity that the economic incentives for Russia and in particular China, were substantial enough to attract these players to accelerate their positioning in the region. China is an interesting case, as all interviewees made a point that their incentives were almost purely economic (Interviewee C 2022; Interviewee D 2022).

It was on the area of military build-up and power projection where interviewees differed the most. Interviewee A said that, especially post-Ukraine, the Arctic would become the focus of more intense military activity (Interviewee A 2022). NATO's expansion of their Cold Response and other Northern exercises seemed to be a clear demonstration that the Arctic's historic exceptionalism and delineation to wider geopolitical tension was eroding. Others however were more cautious about making that link. Some (interviewee B), flatly denied the fact that military build-up beyond the current levels was possible, based on the lack of non-ice land for the building of installations, vast areas of consistent sea-ice and other structural impediments (Interviewee B 2022). Another interviewee (D) pointed to the 'exceptionalism' of the Arctic, which was delineated from geopolitical escalation elsewhere, but also questioned the future desire of nation states to limit military escalation, especially with the current situation in Ukraine (Interviewee D 2022). Finally, one interviewee (C), identified that power projection objectives differ between great powers in the region, which means that the definition as it is now needs greater nuance to account for this (Interviewee C 2022). For example, Iceland is mainly concerned about sustainable economic development, whilst Russia is clearly engaged in accelerating military capabilities. However, all experts still displayed a degree of concern that, with the current tensions, nations may seek to exploit military power projection to the physical limits, undermining the geopolitical delineation argument to an extent.

Finally, this degree of conflicted agreement was also displayed on questions and responses around political fragmentation regionally. The big issue was again, Russia's recent invasion

of Ukraine. Most interviewees flagged the fact that within the vacuum of the region, political cooperation had historically continued even amidst wider geopolitical tensions (Interviewee A 2022; Interviewee C 2022; Interviewee D 2022). These interviews highlighted that climate change had been the most important delineation factor, especially in the last 20 years. Interestingly, multiple interviewees (B & C) highlighted the fact that the volume of fracture lines between states had been greater prior to the Ukrainian invasion, as many states in the NATO bloc were contesting each other over sovereign territorial water limits, as well as a cooperative-contestation dynamic that exists between China and Russia (Interviewee B 2022; Interviewee C 2022).

However, all respondents agreed that the nature of Russia's aggression and the suspension of the Arctic Council and other transboundary cooperation represented a fundamental shift in Arctic cooperation, healing fracture lines between NATO and Western countries and concentrating fragmentation between Russia and the 'rest', according to interviewee C (Interviewee C 2022). It is difficult to ascertain whether this fracture line will continue to grow, yet the rapid nature in which formal cooperation has collapsed suggests that fragmentation could become less contested down the line.

Whilst the interviewees reveal a broad degree of alignment with this thesis's updated characteristics of shatterbelts, it is also very important to triangulate the initial findings with the recent policy documents from the key Arctic players:

Table 2: National Arctic Security Policy Documentation Congruence Matrix

	Theme A - Fragmentation	Theme B – Strategic Geography	Theme C – Great power competition
Broad Agreement	Russia, USA, Denmark	Russia, Canada, Norway, USA, Sweden, Denmark	Russia, USA, Sweden
Somewhat Agreement/Changes need to be made	EU, Canada, Norway, Finland, Sweden	EU, China, Iceland	EU, Canada, Norway, Finland, Denmark
Broad Disagreement	Iceland		China
No Mention	China	Finland	Iceland

From these initial results, there seems to be a broad agreement with the interviewees focus on the importance of strategic geography. Russia, Canada, Norway and the USA are all extremely forceful on the need to exercise varying degrees of control and oversight over the resources and trade routes regionally. For Russia and Canada in particular, control of the respective routes seemed to be framed in their 'national interests', due to the exposure of their sovereign waters and wider territory to international traffic from new waterways (Government of Canada 2020; Russian Federation 2020). Additionally, Norway, who sees most of its foreign revenue come from hydrocarbon exports, gaining control over resources was critical to national security conceptions (Norwegian Ministries 2020: 32).

Even countries such as China, Sweden and Denmark all highlighted the need to exercise degrees of control for their own interests. Only the EU, Finland and Iceland prioritised a stronger need to manage the resources sustainably and implement some sort of regulatory consensus to avoid worsening the climatic situation (Finnish Government 2021: 24; Government of Iceland 2021: 4; High Representative of the Union for Foreign Affairs and Security Policy 2021: 8). This involved wider cooperation and consensus, which along with China, represents a clear divide between states framing. China and Iceland, for reasons which will be discussed in later chapters, seem to approach strategic geography in a collaborative manner, framing climate change as an existential risk which requires an integrative approach towards adaption and mitigation (Government of Iceland 2021: 16; State Council of the People's Republic of China 2018). Finland goes even further and does not properly acknowledge the contested nature of strategic geography, partly due to their inoculation from emerging trade routes and the lack of codified rights to key resources versus other Arctic states, as well as their self-awareness of their role as a buffer or neutral zone between Russia and NATO countries, justifying their desire to engage all parties equally and avoid contested topics (Finnish Government 2021: 19). This is interesting, as Sweden demonstrates a similar security and neutrality profile to Finland yet is far more aggressive in warning against Russian aggression regionally and the risks of economic competition contributing to an escalating economic conflict, again framed as undermining key objectives of limiting climate change (Government of Sweden 2020: 23).

Other states tended to view strategic geography in a distributive manner (win-lose or a zero-sum mentality to security), with Russia and Canada in particular specifying that their

development and access was critically tied to national security objectives, whilst also acknowledging the need to support cooperation in the region (Government of Canada 2020; Russia Federation 2020). This supports the general results of the interviewees, who mostly indicated that states such as Russia and Denmark as well are more likely to embed Artic control into national security, given the littoral geographic and political exposures. Denmark is interesting as its exposure is mostly based around Greenland, a huge physical landmass with a high presence of key resources and strategic positioning, far greater in size than the Danish mainland. This is reflected in the need to 'control', 'defend' and 'secure' Arctic assets, which again is tied to national security considerations (Government of Denmark 2022: 19-20).

Whilst there was less consensus on the existence of great power competition, the integrative and distributive approach of varying states was present. The USA, Canada and Russia all stressed the need to accelerate their own independent power projection capabilities, committing to definitive increases in their military investment and projection capacities. Even Norway stressed the need to strengthen their own military responses independently of NATO, whilst Sweden, a nominally neutral state, views greater military autonomy and power projection as key to balancing interests and maintaining stable regional dynamics (Government of Sweden 2020: 24; Norwegian Ministries 2020: 17). Other states seemed less focused on identifying their own response to competition from a security angle, prioritising a cooperative approach in order to 'deconflict' tensions, usually framed amidst climate action. China and Finland both stressed the need to respect international law and forums such as the Arctic Council when dealing with contentious issues, whilst the EU emphasized the of engaging strategic rivals such as Russia through more embedded regional, climate action partnerships, which tends to be more consensual and transboundary in scope than classic high-level multilateral forums (Finnish Government 2021: 13; High Representative 2021; 9-10; People's Republic of China 2018).

Another interesting finding was a greater focus on military power projection activities rather than economic ones. This contrasts to the interviewee responses, where many (interviewees B & C) stressed natural structural and political barriers to build-up in the region (Interviewee B 2022; Interviewee C 2022). Excluding Iceland and China, all state actors directly identified that competition between great powers was rising. Whilst Russia didn't directly mention another country, the USA, Canada and Denmark all specifically discussed the risk from

Russia in their documentation and even talked about how to balance the entry of China and other external actors into the region (Government of Canada 2020; Government of Denmark 2022: 12; United States Army 2021: 2). Again, even the nominally neutral states of Finland and Sweden discussed how Russian tensions are contributing to a worsening security dilemma (Finnish Government 2021: 19; Government of Sweden 2020: 23). Whilst approaches on how to respond to competition differed, most actors agreed that great power competition existed and identified a need to respond from a hard security frame.

Fragmentation, like great power competition, saw most Arctic states highlight the growth in geopolitical tensions and a need to address them. Only China does not mention anything about fragmentation; Iceland, which mentions geopolitical tensions, argues that it has been overstated (Government of Iceland 2021: 21; People's Republic of China 2018). The other states stress that whilst fragmentation is occurring, this is being balanced by the existence of cooperative structures and joint interests, mainly around climate, fitting a narrative of friendly or cooperative contestation. Even the USA admits that the most likely outcome is deepening cooperation rather than military escalation for Washington's interests to be met, with Russia also keen to strengthen ties within climate adaption and mitigation activities (Russian Federation 2020; United States Army 2021: 2). Russia is particularly susceptible to permafrost degradation and as such, a clear fragmentation split across an anti-Russia coalition seems unlikely, as other nations like Norway and the EU also stress the importance of strengthening cooperation to combat climate change's existential threat (High Representative 2021: 6, Norwegian Ministries 2020: 17-19). Interestingly, Denmark is the only NATO member to completely avoid discussing cooperation with Russia, choosing instead to assert the need to strengthen NATO defence structures and capabilities, as well as deepening cooperation with the US, as key to national security objectives (Government of Denmark 2022: 12). States do identify regional fragmentation, but insist climate cooperation, especially mitigation, are shared interests, which overlap with national security interests.

The positions taken by the Arctic states analysed is predicated on a security environment that existed prior to Russia's invasion of Ukraine. All the Arctic state's policy statements and documentation were published prior to 2022; they are not the latest national positions on competition and conflict in the Arctic (Harvey 2022). What is more likely to occur is that the growing shoots of fragmentation could widen the single fracture, Russia versus everyone else (Østhagen 2019: 19). The rapid change of pace as a result of the invasion of Ukraine means

that state's positions, especially the distributive ones such as Russia and USA are only likely to harden in their next respective Arctic security strategies (Seethi 2022). Whether cooperative behaviour can be maintained is very much up in the air, especially with the suspension of most transboundary cooperative initiatives.

Another common theme is the nature of climate change. Without fail, all interviewees indicated that climate change had both been a vehicle of cooperation for Arctic states, as well as an accelerator of conflict. The policy documentation also reflects this, with most states indicating that the argument against political fragmentation and competition stems from combatting climate change together, whilst there is also a recognition that national control or availability strategic geography becomes more important in the wake of global warming and easier regional accessibility.

The overall results indicate that the interviewees broadly subscribed to the three definitions, whilst the policy documentation, whilst supporting much of the proposed framework was far more diverse in positions. This is to be expected, given that the framing of virtually all Arctic policy documents identified was that of protecting their own interests first, whether they were framed as only national or within the mutual interests of the Arctic community. This reveals a distributive versus integrative approach to Arctic geopolitics. States at the forefront, climatically, geographically and politically of the changing Arctic (like Russia and Canada) tend to adopt a more distributive framing of regional geopolitics, which essentially leads to agreement with the defined characteristics. States who are either further removed, have lower economic or security interests, or who's security objectives tie more into cooperation and deconfliction (like Finland and Iceland), typically engage in a more integrative manner and thus had greater disagreement with the definitions as they are.

The subsequent chapters will aim to breakdown each theme based on the interviewee and policy document results, as well as try to either refine or add nuance to the established definitions.

Chapter VII: Characteristic Analysis - Political Fragmentation

Assessing the degrees of political fragmentation between distinct state units becomes a little trickier when moving away from the initial results and into deeper analysis. The first thing to say, is that when describing general fragmentation in the region, both interviewees and the policy documentation indicate a recognition that relational breakdowns between state actors, both multilaterally and bilaterally, were a common occurrence. Of the interviewees, all recognised that contestation and divergence between actors occurred. Interviewee C pointed out that fracture lines tended to be 'high in volume, yet low in intensity' (Interviewee C 2022). Another interviewee (A) continued along this theme, indicating that the Arctic was a region which was 'less comprehensively' covered by legal treaties or definitive codification of territorial laws and rights (Interviewee A 2022).

Much of this relates to the Arctic's remoteness and difficult conditions, which has prevented conventional mapping and monitoring up until recently, escalating disputes over ownership of subsea resources and international waters (Goble 2020). These include the dispute over the North-Western passage between Canada and the USA, which was also a victim of the US's non-signing of the United Nations Conventions on the Law of the Sea (UNCLOS). Canada classifies the waterway as residing within Canada's Exclusive Economic Zone, designating sovereignty under UNCLOS and meaning they can bar transit, whilst the USA argues that the waterway is an international strait and thus foreign vessels have the right of transit and Canada has the responsibility of maintaining free passage, amongst other responsibilities (Schlanger 2019). Despite cooperation in other Arctic theatres, American officials were still claiming Canada's claim contravened international law as late as 2019, demonstrating the longevity of the fragmentation and the interests of sovereignty versus access that it highlights (Schlanger 2019).

Whilst policy documentation was less in agreement about the scale of fragmentation, all bar China, recognised that fragmentation or at least competitive risks existed in the Arctic. The USA recognised that Russia and China had recently developed strategies 'contrary to US interests', whilst Canada described the need to avoid 'complacency at a time of increased interest and competition' with Russia and China (Government of Canada 2020; United States Army 2021: 16). Russia, whilst avoiding directly naming any specific nation, recognised the growing 'conflict potential' of the region amidst a falling degree of compatibility of

cooperation with Arctic partners (Russian Federation 2020). Even Iceland, which for the most part disagrees that fragmentation is at dangerous levels in the Arctic does admit that 'tension[s]…in the region [are] rising' (Government of Iceland 2021: 20).

Even prior to Russia's invasion of Ukraine, greater accessibility thanks to global warming seems to have increased the framing of 'national interest' by Arctic states to justify greater involvement regionally. This was a term mentioned by USA, Denmark, Canada and Russia, as well as being hinted at by the EU, suggesting a framing of Arctic engagement as primarily supporting the safeguarding of national capital's economic and security objectives (Government of Canada 2020; Government of Denmark 2022: 5; Russian Federation 2020; United States Army 2021: 16). Interviewees A, C and D all confirmed this, with interviewee D indicating that the Arctic nations no longer fully trusted institutional engagement and norms-based cooperation to reduce their risk exposures (Interviewee A 2022; Interviewee C 2022; Interviewee D 2022). Norway discussed the need to build up independent power projections outside of NATO frameworks, calling for the positioning of more F-35 squadrons and P-8 Poseidon maritime patrol aircraft at Evenes Airbase, as opposed for calling the stationing of more NATO-umbrella units (Norwegian Armed Forces 2022; Norwegian Ministries 2020: 17).

Fragmentation also could be seen occurring between China and Russia; China depends on Russia to guarantee their economic presence in the region, as well as supporting accessibility (Lanteigne 2020). Interviewee D indicated that fears from Moscow regarding Russia's position as the 'junior partner' geopolitically to China means that being China's Arctic gatekeeper could take on a greater importance in balancing the relationship, especially if Chinese penetration in Greenland and Iceland continues to face increased local and European resistance (Dams et al. 2020: 16; Interviewee D 2022). In some ways, there is relational symbiosis, with Chinese access dependency balanced in theory by Russian dependency on Chinese capital for new energy infrastructure; $12bn of Chinese financing was required for the continuation of Russia's keystone Yamal liquid natural gas project in 2016 amidst the poor state of Russian financing following Western sanctions imposed post-Crimea (Reuters 2016).

Even during this period, there was consternation from Moscow that China was becoming more hesitant to slow down financing in the Russian Arctic, as this would have endangered

China's economic relationships with the USA and Europe (Gabuev & Spivak 2021). It can be safely assumed that economics and financial gain govern Chinese geopolitical objectives, and their flagship Polar Silk Road has slowed down in Russia since 2014. Moves such as Sinopec's 2022 decision to stop all investments in Siberian oil represent a relationship still governed by self-interest, and in China's case, profitability. This is despite the recent agreement which declared 'no limits commitments' including the 'strengthening of bilateral strategic cooperation', signed in 2022 prior to the Beijing Winter Olympics, days before Russia's invasion of Ukraine (President of Russia 2022). How this model will be applied to Sino-Russian Arctic relations is yet to be seen, and whilst both nations have announced intentions to re-direct much of Russian oil and gas exports from Europe eastwards, there is little guarantee that Xi Jinping will want to shift Chinese energy security and geopolitical interests more towards Moscow for risk of Western reprisals (Wright 2022).

This would contrast with ideas of Arctic exceptionalism, where interviewees B & D see geopolitical rivalries typically delineated from Arctic politics, with the Arctic Council being a forum where the security rivalries were 'left at the door' (Gjørv & Hodgson 2019: 2; Interviewee B 2022; Interviewee D 2022). At this point, interviewee A sums it up well that fragmentation is everywhere, given the interests-based nature of modern geopolitics even within traditional allied groupings such as NATO (Interviewee A 2022).

Whilst interviews do point to fragmentation being commonplace prior to the Ukraine invasion, all interviewees and indeed national Arctic policy documents point to existence of cooperative framework wherein competitive dynamics occur. Interviewee D identifies that full competition and a breakdown of cooperation was near impossible due to the dependency Arctic nations have on each other, especially when it comes sustainable management of natural resources (Interviewee D 2022). Interviewee C points out that, at the highest multilateral level, whilst Russia was internationally condemned and even partly excluded for their invasions of Georgia in 2008 and Crimea in 2014, Arctic Council meetings continued unabated (Interviewee C 2022). Following the annexation of Crimea in 2014, the Arctic Council agreed to the Iqaluit Declaration in 2015, which initiated new initiatives such as the Pan-Arctic Network of Marine Protected Areas and established a new task force to 'assess future needs for a regional seas program' (Arctic Council 2015: 3-4). Clearly, Arctic cooperation, especially climate cooperation, has successfully resisted the impact of geopolitical tensions halting work towards shared interests.

Even with growing geopolitical tensions in recent years, nation states are keen to express their commitment to fostering greater cooperation and engagement. Russia expresses concerns over permafrost loss and wants more focus on 'international scientific research' to better understand this (Russian Federation 2020). This makes sense as Russia's exposure to permafrost melt is severely high. Approximately 60% of Russia's landmass is permafrost, which with rising temperatures, threatens the structural integrity of military and economic installations in the region; 45% of Russian hydrocarbon extraction facilities could suffer from degradation of the land, totally up to $250billion of exposed assets (Kertysova & Ramnath 2021).

China's framing of their Arctic strategy is completely based on promoting integration and cooperation on a holistic basis to 'safeguard common interests' for all; this is based on the realities of their near-Arctic status and their complete dependency on littoral Arctic states for their access and security of investment (Dams et al. 2020: 16; People's Republic of China 2018). Even the USA and Canada, which interviewees B and C said frame their Arctic security in a more distributive manner than European nations, prioritise cooperation and mutual engagement rather than conflict as the outcome that benefits each's national security objectives the best (Government of Canada 2020; Interviewee B 2022; Interviewee C 2022 United States Army 2021: 1).

The picture being painted is one of an Arctic which does not necessarily match traditional conceptions of fragmentation. Of all the Arctic states analysed, only Denmark truly displayed a viewpoint of a single fracture, choosing to focus on meeting authoritarian actors head on through a more hard and tangible show of force; even the United States Army strategy was less severe in its imagery (Government of Denmark 2022). This is a binary approach to contestation, consistent with traditional authors such as Hoffman, who characterised shatterbelts by limited political or economic cooperation amidst mutually antagonistic state actors and almost no progressive or integrative cooperation (Hoffman 1952: 267). Binary fragmentation or contestation is used to describe the situation wherein relations between state actors break down or freeze, with limited evidence of cooperation beyond maintaining some communication, mainly for deconfliction purposes (Kelly 1986: 173). The Cold War, especially in the early oscillatory phase, was characterised by minimal progressive cooperation, mainly restricted to the realms of deconfliction such as the Nuclear Non-

Proliferation Treaty or the maintenance of military hotlines; modern geopolitical competition is far more nuanced, owing to, according to interviewee A, the more multi-faceted nature of shared interests and risks (Interviewee A 2022; Reilly 2000: 50).

Arctic cooperation is far more embedded outside of formal Track 1 settings; the last 20 years has seen the creation of multiple sub-groupings such as the Barents Euro-Arctic Council (Nordic states as well as the EU and Russia), which aims to generate consensus on the rights of indigenous peoples and how enhance their representation at decision-making levels (Finnish Government 2021: 20). Other examples include the Circumpolar Coordination on Wildfire Prevention, Preparedness and Response program, designed to share and exchange monitoring results of wildfire hotspots and best practices designed to combat them, which was established in 2019. This occurred through arguably higher-than-normal levels of fragmentation, especially considering deteriorating Sino-American relations and even friction between Washington and Copenhagen over then-US-President Trump's very public statements about buying Greenland (Goble 2020). The Arctic Search & Rescue Agreement, signed in 2011, saw adherence by all members, even after the Russian invasion of Georgia. The continuation and even inception of transboundary cooperative frameworks amidst rising geopolitical tensions is a clear indicator that Arctic fragmentation is not in the similar vein as historical examples employed by traditional writers to describe shatterbelts; the absence of cooperation as a defining feature (Cohen 1973: 252, Mackinder 1919: 170-181).

The irony is that climate change, the frame chosen by this thesis to update shatterbelt characteristics, enhances its contested nature. Interviewees A and C are relatively clear that climate change acts not only as a tool to unlock greater competition in the High North, but also brings states together in a common goal (Interviewee A 2022; Interviewee C 2022). Climate change is a transboundary issue and can only really be tackled in a meaningful manner when there is total cooperation (Heininen & Exner-Pirot 2020: 6-9). We have discussed earlier Russia's issues with permafrost, but climate change is also impacting the seasonal migrations and yields of commercial fishing, a concern expressed by the EU, Norway and Iceland (Government of Iceland 2021: 16; High Representative 2021: 7; Norwegian Ministries 2020: 12). Additionally, interviewees A, B and highlighted that greater accessibility through the new sea trade routes for the region is a huge concern, with Canada, for example, keen to prevent over-usage and thus worsening greenhouse gas emissions regionally, as well as managing foreign traffic and perceived risks to sovereignty

(Government of Canada 2020; Interviewee A 2022; Interviewee B 2022; Interviewee D 2022).

The existential risk posed by climate change means that as an issue, it garners relatively universal support among Arctic nations to cooperate on (Roeben & Azubuike 2020: 8). If the Arctic, for example, saw ice-free summers by 2035 as analysts predict, then it would be the Arctic states who take the primary benefit and the drawbacks from being at the nexus point. Consensus on the need to tackle climate change has been a consistent theme of Arctic Council dynamics, even when bilateral relations are poor, the Council's deliberate refusal to discuss military or other divisive security matters has allowed for a relatively successful delineation of geopolitical tensions from addressing common Arctic problems and interests (Wehrmann 2020: 13). This is something that more integrative-focused nations are keen to pursue, such as Sweden and Finland, both given their exposure to climate risks and the need to engage geopolitical powers under common cause, to limit the spill over effect of any tension or conflict on the integrity and security of sovereign and territorial issues (Finnish Government 2021: 15; Government of Sweden 2020: 32).

The binary nature that characterised fragmentation in shatterbelts historically does not play out as clearly in the Arctic, given the existential framing of climate change as a pervading risk throughout all regional issues and offering enough incentives for states to detach their bilateral issues from solving multilateral threats (Heininen 2018: 181). The classic fracturing or divergence of states within a shatterbelt is far less evident, as the construct of interests by Arctic states is more nuanced and layered, with interdependency on issues surrounding climate change and sustainability being pervasive to prevent too much geopolitical spill over (Busch 2021: 1-3). As such, when using the phrase 'high degrees', the reality in the Arctic paints a different picture to Eastern Europe or the Middle East, and as such, based on the research, there is not enough of a binary nature to fragmentation for the region to fully qualify.

There is one caveat. The Russian invasion of Ukraine has, as one interviewee (C) remarked, moved the region from having multiple, smaller fracture lines, to a coalescing of alliances around one major fracture line: the West v Russia (Interviewee C 2022). This trend was confirmed by the national Arctic strategies from the USA, Canada, Norway, Denmark and EU, which recognised that increased Russian economic and military activity regionally prior

to 2022 (from the annexation of Crimea by Russia specifically), as well as Putin's aggressive strategy to enhance Russian presence across all geopolitical theatres, was the biggest risk to Arctic stability; the fallout of Ukraine on Arctic was a wider theme these countries had highlighted even before Putin invaded (High Representative 2021: 3; Government of Canada 2020; Government of Denmark 2022: 13-14). Despite all national policy documents analysed being written prior to 2022, NATO and EU countries paint a picture of a single, growing fracture line that could come to define Arctic relations (Lavorio 2021: 121; United States Army 2021: 15-18). Questions linger as to how large this divide will become, whether China will use its recent Good-Neighbourly Treaty of Friendship in 2022 to forge a closer relationship with Russia against the West and whether the Arctic will become more lineated to the conflict in Ukraine and other geopolitical theatres of contest.

However, the suspension of the Arctic Council, new NATO cold weather exercises in Norway and the North Atlantic and the application of membership by Sweden and Finland to NATO demonstrate that Ukraine crisis is having ramifications in the High North, forcing previously neutral or balancing states to pick a side and making cooperation with Russia on most fronts, inconceivable for the moment (Harvey 2022). If this trajectory keeps up, then it is likely that Arctic fragmentation could become even more binary, and in line with historical definitions of shatterbelt fragmentation (Seethi 2022). Yet it must be made clear that predictive statements are not part of this analysis and even if this trajectory held, it would be the nature of interest-based geopolitics that drives shatterbelt behaviour in the Arctic; climate change would only be a reason to allow greater fragmentation through resource and strategic competition, not as the primary driver of divergence. Thus, it can be concluded that the Arctic does not yet meet the metrics of shatterbelt fragmentation, yet the future is still very much unclear.

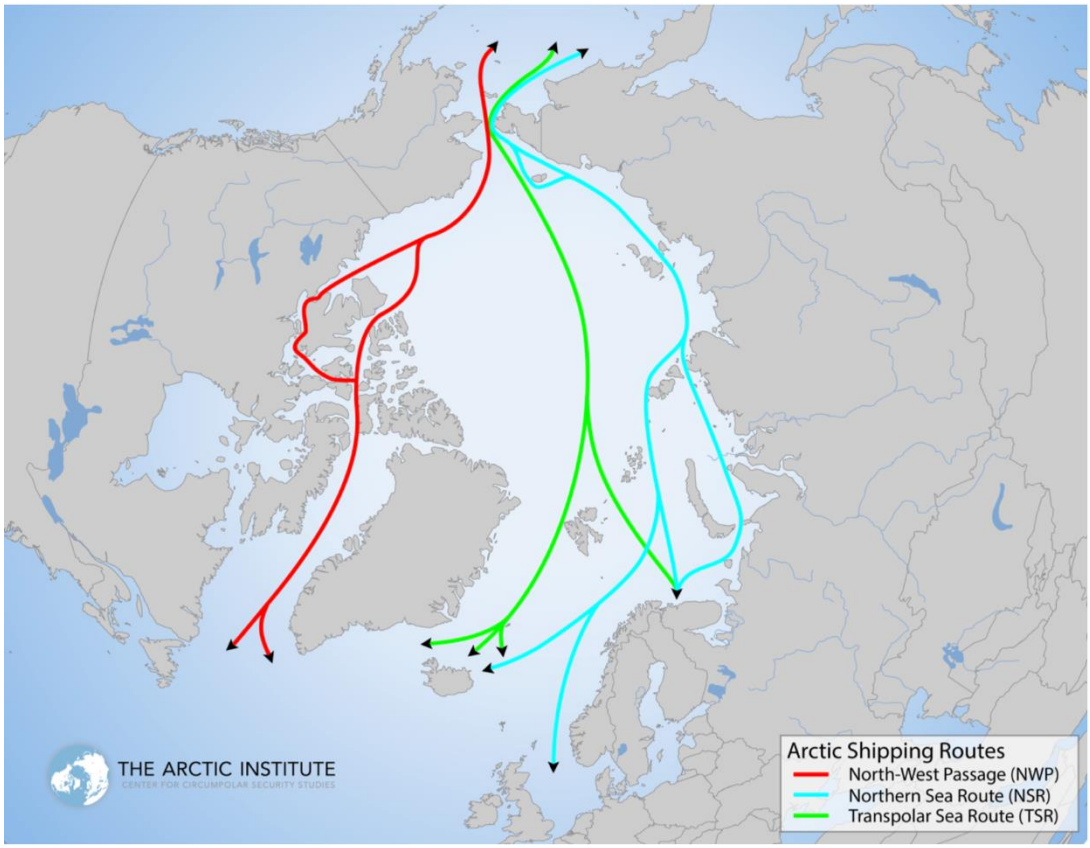
Chapter VIII: Characteristic Analysis - Strategic Geography

This thesis's claim regarding shatterbelts occupying **established or changing** strategic geography that has economic, political and security importance, is arguably the least contested of all three. All interviewees highlighted the importance of strategic geography to nation state's objectives within Arctic power projection and enhancing resource and trade security, with national policy documents confirming the varying criticality of different aspects of strategic geography to national interests.

Interesting vectors of analysis emerged via both the interviewees and policy documentation, with most interviewees (A, C, D) dividing up Arctic strategic geography into two aspects: trade routes and resources (Interviewee A 2022; Interviewee C 2022; Interviewee D 2022). Both aspects embody both the changing and established nature of the definition above. Interviewees C and D indicated that traditional shatterbelts viewpoints see strategic geography as fixed, yet with climate change allowing for changing spatial norms within wider geopolitics, there seems to be greater flexibility in classifying modern shatterbelts (Interviewee C 2022; Interviewee D 2022).

Trade routes for instance, under traditional definitions of shatterbelts, would have to be fixed, based on assumptions of unmoving or fixed geological and geographic features. Saalbach, for example, highlights the salience of the Suez Canal and the strategic geographical chokepoints of the Nile Delta as having substantial security connotations for regional control of trade and military power projection for the best part of 4000 years (Saalbach 2017: 10-12). The same can be said of resources, with the high volume of coal deposits in the Balkan region alone, in part, driving the crush zone in the region in the latter part of the 20th century between the USSR and the West in particular (107 million metric tonnes compared to 284 for the entire Soviet Union) (Hoffman 1952: 269).

Map 1 –Arctic Shipping Routes (Present and Future)



(Humpert 2011)

The above map shows the proposed Arctic shipping routes. Using climate change as a frame helps open a wider range of possibilities when identifying a potential shatterbelt. Warming in the Arctic could make the North-West Passage summers ice free by 2035; consequently, Canada's Arctic strategy is very clear on the focus for increased maritime patrols, enhancing monitoring capabilities such as RADARSAT (dedicated Arctic satellite monitoring) and accelerating the development of an independent ice-breaker fleet to almost future-proof their power projection capabilities in the face of changing physical demands (Government of Canada 2020; Interviewee D 2022). Denmark has proposed a Defence Monitoring package to be introduced in 2023 (Government of Denmark 2022: 7). The use of terms such as avoiding 'complacency', matches the tone of other countries like Norway, who indicate that despite their expectation for shipping traffic to remain low in Arctic routes in the near-future relative to other global trade routes, their strategy must also be dictated by a future expectation that growing great interest by China and other non-littoral Arctic players will accelerate the demand and volume of trade, and thus the salience of the route to national interests

(Government of Canada 2020; Interviewee D 2022; KJ Reports 2019; Norwegian Ministries 2020: 16).

Other countries like Iceland, are particularly keen to 'safeguard all related interests' relating to cargo shipping, given the risk of increased traffic and the knock-on sustainability, safety and regulatory risks this brings (Government of Iceland 2021: 16). The overall trend, especially of the Nordic countries, is focused on the future, in the opinion of interviewees B and D, with climate change the reason that states are keen to adapt before the traffic volume in shipping reaches levels that they can't cope with (Interviewee B 2022; Interviewee D 2022). For reference, it is estimated that by 2024, the North-East Route, through the Russian Arctic, could carry 92 million tonnes; this has likely prompted Russia to accelerate their cargo infrastructure capacities as demonstrated by their ambitious port and facility building program in their Arctic strategy (Russian Federation 2020; Silk Road Briefing 2020).

It is also interesting to note that some interviewees (C) argued that the salience of trade routes changes depending on how littoral or near a state's geography is to a route (Interviewee C 2022). For China, interviewees A & D remarked that their framing of trade routes and strategic geography more generally is clearly influenced by economic ambitions and a desire to expand their global infrastructure network (Interviewee A 2022; Interviewee D 2022). Access to the North-West Passage would cut the transit between Shanghai and St Johns in Canada by 3500 nautical miles (Sui, Fu & Su 2021: 1). China's Arctic strategy focuses on enhancing trade route connectivity, especially considering their Polar Silk Road strategy, launched in 2013. The aim of this strategy is to connect the Belt & Road Initiative (BRI), designed to re-route global trade links towards China, to growing Chinese interests in the Arctic, and vice-versa, enhance the economic penetration of Beijing in the region (Weidacher-Hsiung 2016: 245).

Given that China is dependent on Arctic states for access to the region's routes, the documentation focuses heavily on keeping management of the routes out of the hands of one nation, and in the remit of treaties like UNCLOS and the wider framework of international law (People's Republic of China 2018). Wording such 'cooperation', 'respect' and 'win-win' indicate that a dependency on other states for route access seems to drive an integrative approach to trade routes, for fear by China that domination by a single or a few states would hamper their connectivity interests and may hamper resource supply chains that form the

cornerstone of their BRI ambitions; this was corroborated by interviewees B and D (Interviewee B 2022; Interviewee D 2022; People's Republic of China 2018). Maintaining an 'open' Arctic, 'free' of distributive monopolising behaviour serves their interests (Bennett 2015: 646; Government of Canada 2020; United States Army 2021: 16).

In contrast, states with littoral borders to emerging trade routes are far more likely to emphasise their security importance. Canada and Russia are the two states with the strongest framing of trade route control as part of core 'national objectives (Government of Canada 2020; Russian Federation 2020). For Canada, the North-West Passage weaves through Canadian territorial waters, around key strategic geography such as Baffin and Southampton Islands, which are near Canadian naval and air force installations. The prospect of the route being international waters would be a huge concern as foreign shipping and assets could come very close to Canadian territory without violating sovereignty set out by UNCLOS on maritime delimitation, which was confirmed by interviewee D (Interviewee D 2022).

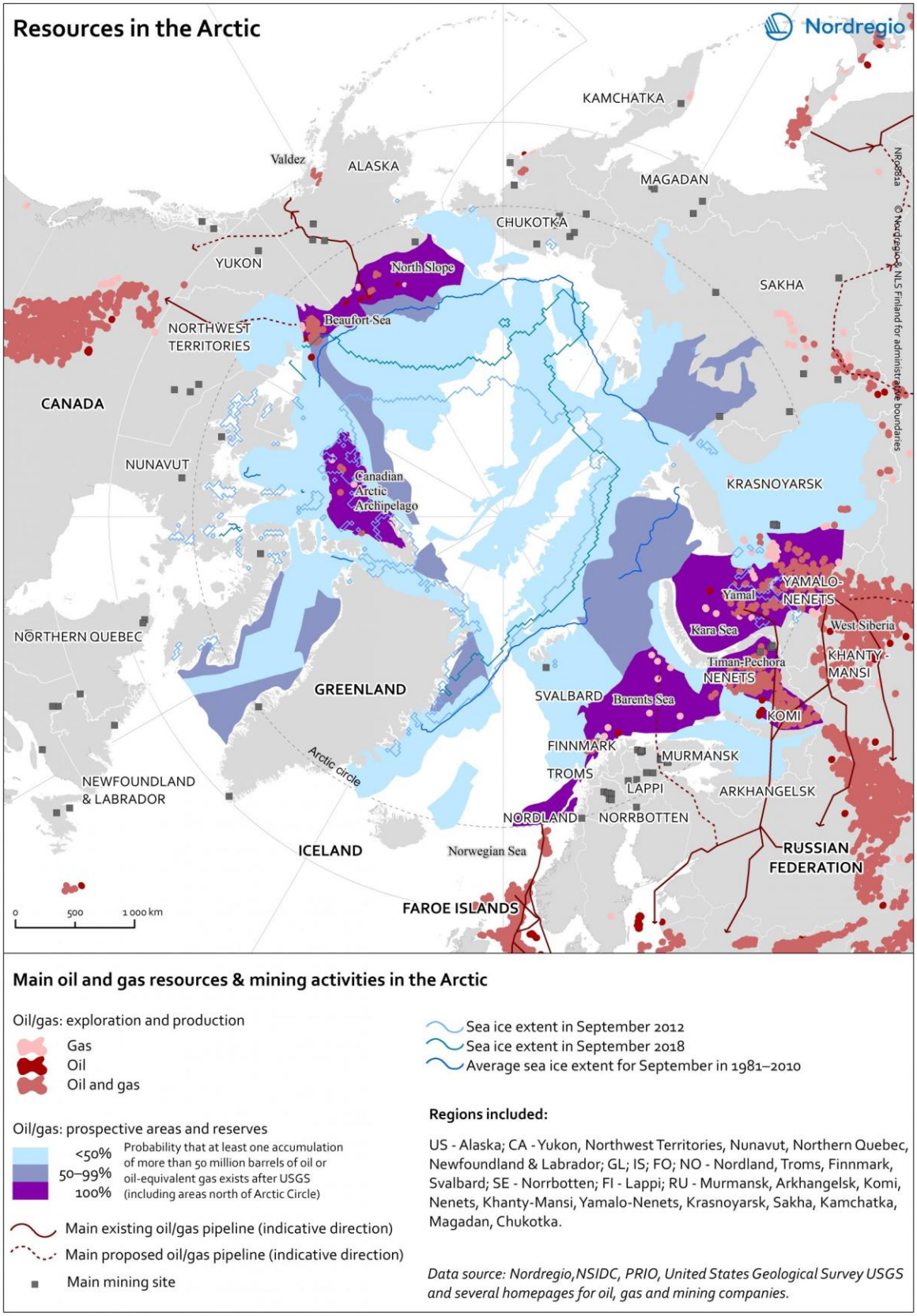
For Russia, the Northern Sea Route (NSR) section of the North-East Passage sits mostly within the Russian Exclusive Economic Zone and given the Russian proclivity for sensitivity towards foreign assets near their waters, especially with the geopolitical fractures caused the invasion of Ukraine, interviewee A said that Moscow views control of the route as paramount to shoring up its Northern defences. (Interviewee A 2022; Østhagen 2019: 9-10). The focus on exercising national 'control[s]' and protecting 'sovereignty' corroborate these fears of strategic rivals using the route to 'encircle' Russia as a whole; this is not surprising given the domination of geopolitical security above all other considerations within Moscow's foreign policy (Goble 2020; Russian Federation 2020). A Russian controlled North-East passage better secures protection of Arctic military assets (Russian Federation 2020). Considering that 2/3rds of the Russian naval forces are within distance of the route (Russia's Northern Fleet), as well as 80% of Russian natural gas production, it is easy to see why the route takes a greater security importance (O'Connor & Jamali 2021; Russian Federation 2020).

Traditional viewpoints around strategic geography within shatterbelts, were predicated on existing land formations, transportation routes and economic behaviour, with these routes seemingly imprinted within the fabric of human civilizations for generations (Holmila 2020: 962-963). Whilst still relevant, it does not account for the speed and distortion of changes to physical geography, especially with acceleration of climactic phenomena like the greenhouse

effect and geological metamorphosis in the Anthropecene (Dalby 2014: 3). Already, the Russian Arctic (containing the Northern Sea route) alone is losing ice rapidly (September 2020 saw only 26,000 km^2 of sea-ice, the lowest for that month since records began) with the potential for 80 million tonnes of cargo to pass through the Northern Sea route by end of the decade (Staalesen 2021b). By not recognising that trade routes can fluctuate, far more quickly now with the rate of climate change, definitions will always remain limited to an age where geopolitics and geostrategy is dependent on anentropic natural underpinnings (Hommel & Murphy 2013: 508).

Moving onto the second vertical of interest, resources, the research revealed that climate change also has a changeable impact on this facet of strategic geography. Resources arguably can be seen to be part of the fixed nature of the Arctic's geology and bathometry, as the presence of oil, natural gas and other raw materials have existed for thousands, if not millions of years, embedded in the geography. Indeed, a look at Norway reveals an Arctic strategy designed to protect their fossil-fuel interests and even expand production, whilst advocating for the establishment of 'ocean management plans' and a monitoring of 'living marine resources and…biodiversity'; the language and tone around fossil energies is again framed within the national interest (Norwegian Ministries 2020: 28). Considering that fossil fuels account for '41% of exports, 14% of gross domestic product (GDP), 14% of government revenues, and between 6% and 7% of employment', Norway, in the eyes of interviewee C, is heavily embedded into the continuing relevancy and necessity of fossil fuels globally, meaning the Arctic constitutes a huge strategic asset and risk for Oslo (Bremmer 2021; Interviewee C 2022). Map 2 is a clear demonstration of the vastness of fossil energy resources in the High North:

Map 2 – Confirmed reserves of fossil fuels and current raw material mining sites



(Turunen 2019)

Yet, climate change helps generate greater accessibility for the extraction of these resources. From the interviews, it becomes clear that a majority of the Arctic region's natural resources are either locked up within the ice-covered islands of Greenland for example, or in subsea regions, which are only slowly beginning to be explored. Interviewee A points to the role of raw materials needed within the green energy transition globally, especially those of rare-earth elements (REE) (Interviewee A 2022). The first REE mine (Kvanefjeld) in Greenland was built by a company which is majority owned by Chinese enterprise, Shenghe Resources (Simpson 2017: 2). China's expansion into Arctic mining and future resources is again tied to their BRI strategy, aimed at strengthening Beijing's hand within future industrial value chains and consequently, future trade dependencies (Pelaudeix 2018: 7). Considering that the EU depends on China for 98% of its REE supply, the linkages become clearer as to how resource control is tied into global security, especially with the future energy transition in mind; the EU Arctic Strategy confirms this, recognising the unacceptable dependency on China for most of their critical raw materials (High Representative 2021: 9). The availability of precious minerals and materials in multiple countries (see Table 3 below) is in indication of the economic potential of the region. Elements such as Vanadium and Tungsten are scarce, both globally and in the Arctic, which could prompt a scramble. China also dominates the global Tungsten value chain, producing 85% of the world's supply, with the Chinese-backed Kvanjefeld mine in Greenland, before it was shut, looking to expand operation into Tungsten rich regions (Boersma & Foley 2014: 35).

Table 3 –Confirmed presence of selected raw materials in Arctic Countries.

	Canada	Greenland (Denmark)	Norway	Finland	Russia	Alaska (USA)
Iron	x	x	x		x	x
Copper	x		x	x	x	x
Nickel	x		x	x	x	
Zinc	x	x	x	x		x
Lead						x
Titanium		x	x		x	
Aluminium					x	
Vanadium		x				
Molybdenum		x	x	x	x	x
Cobalt	x		x	x	x	
Tungsten	x					
Gold	x	x	x	x	x	x
Silver	x	x	x	x		x
Platinum	x	x	x	x		x
Palladium	x	x	x	x		
Tantalum	x	x				
Niobium		x			x	
Other REE	x	x	x		x	
Uranium	x	x				x

(Matmatch 2019)

For a country like Denmark, who is only an Arctic state by virtue of owning Greenland, preventing Chinese and other foreign interference on the island is vital to their outsize geopolitical impact, especially given deposits of raw materials which will become available as ice melts (Greenland is estimated to have 38.5 million tons of rare earth compounds; total global reserves stand at 120 million tons) (Dempsey 2019; Interviewee B 2022; Interviewee C 2022). China's interest in Greenland, was embedded within a wider infrastructure construction programme, including the takeover of Grønnedal naval base by a Hong Kong registered company and the proposal by the China Communications Construction Company's to build new international and domestic airports. This prompted Denmark to intervene to urgently finance their construction in 2018, for fear of China weakening Copenhagen's position in Greenland by tacitly encouraging political fragmentation on the island (Dams et al. 2020: 34).

In addition to the island's proximity to new trade routes and its role as a staging point (Thule Airbase) for US and NATO power projection versus Russia, Denmark aims to limit external exposure (closing the only REE mine, which was owned by China, in 2018) to the island and scaling up their own independent capabilities to the tune of 1.5billion Danish kroner (approximately $212million USD) in additional annual Arctic defence spending by 2023 (Government of Denmark 2022: 20). The Danish mainland's physical distance to its regional interests and the relational size of Greenland to the Danish archipelago presents outsize strategic problems, and given the scarcity of land or islands which can be developed into power projection points, Greenland's importance becomes even larger as a piece of strategic geography, especially to NATO and the Denmark's relatively aggressive framing towards Russia and China, directly identifying them as the chief foreign interlopers on the island (Government of Denmark 2022: 12-20)

This seems to also point to the idea that resources are quicker or more likely to be securitised compared to trade routes. Interviewee D highlighted that US security planners are more concerned about resource security than that of trade routes (Interviewee D 2022). Despite the US likely to be less interested in fossil fuel exploitation given their own domestic reserves, the US Army's Arctic strategy argues that the conflict potential in the Arctic rises due to competition over unclaimed resources (United States Army 2021: 24). Whilst it is expected for the US strategy to be more aggressive in language given that it was published by the Department of Defence, it is echoed by Russia and Canada, who both cite national security

issues based on expected competition for unclaimed resources, with global demands for precious minerals and energies only likely to rise (Government of Canada 2020; Russian Federation 2020).

Whilst their national document does not explicitly discuss it, Denmark highlights how a lack of clarity over territorial disputes in areas with substantial unclaimed natural resources is a key point of tension and building up resilience to dependencies on unfriendly nations is vital (Government of Denmark 2022: 30). Again, despite not being explicit given the Danish framing of absolutely no fragmentation within NATO, this concern played out when then-President Trump tried to buy Greenland amidst strengthening US positioning vis-à-vis the largest land structure in the Arctic, as well as the substantial REE deposits, which are now considered essential for national defence (Goble 2020). Iceland is also worried about fish stocks, which are at risk from environmental changes and overfishing; a risk which is validated given that the wider marine and fisheries industry accounts for 40% of their foreign exports in goods (Government of Iceland 2021: 17; Responsible Fisheries Iceland 2020).

Interestingly, whilst Sweden and Finland avoided strategic language when describing the importance of resources, both framed climate-induced economic incentivises as damaging to their national interests due to environmental degradation impacts from increased 'tensions'; another example of how integrative behaviour seeks to align existential risks from climate change as common national security considerations (Finnish Government 2021: 17, 30-35; Government of Sweden 2020: 30-32). Perceptions of security risks, whether driven by binary contestation or protecting environments from transboundary risks, are pervasiveness throughout the debate over Arctic resources.

When looking to apply this to shatterbelts, resource control is a consistent theme. A zone becomes desirable, in part, for the valuable resources it contains. A clear example of this is the Middle East during the 1950s; the USA and UK attempted to quench their respective thirst for oil by enhancing commercial and security presences around oil fields and producing regions. The creation of Aramco by the USA (now Saudi Aramco) was designed to counter British commercial presence through Anglo-Iranian Oil Company (now BP) and the Iraq Petroleum Company.

Contestation or a ‘scramble’ for unclaimed resources becomes the object of regional competition and fragmentation, as states prioritise national security agendas tied to resources that are valuable on the world markets (Reilly 2000: 52). Contrast how Saudi Arabia and Iran competed to control the vast oil reserves of Iraq and Kuwait through the 1950s, which helped push the countries apart and fuel a part-proxy conflict that pervades today, Danish and Russian contestation over subsea resources in the Lomonosov Ridge could be a replication of how resource competition can fragment states.

Moreover, strategic resources also serve to bring in larger, great powers, due to the region being an opportunity to not only ease key commodity dependencies, but also as a method of power projection, as interviewee A commented (Hartshorne 1941: 57; Interviewee A 2022). In an era of where economic control and manipulation are considered legitimate tools of asymmetric conflict, strategic control of resources helps to create dependencies against strategic rivals and embed national interests in regional and local circles. This is a concern echoed by traditional neutral states like Sweden, who fear how Chinese and Russian mining and excavation interests could tip the region into an economic security dilemma, as well as an arms race as states look to secure their investments (Government of Sweden 2020: 22). Whilst it has been argued that strategic resources exist everywhere in the world and thus aren’t the primary motivator for great power involvement, their presence reinforces a binary or zero-sum mindset of great power politics (Hensel & Diehl 1994: 49). By allowing a rival opportunity to entrench themselves in a strategic theatre that contains key resources, in the mind of a state under realist conceptions, that is an unacceptable outcome that might lead to more leverage, dependency or exposure being exerted, worsening the ‘perceived’ geopolitical positioning and strength relative to the rival. In the case of the Arctic, referring to the maritime crush zone which brings geopolitical contestants face to face, the Arctic states themselves (namely NATO countries and Russia) are the major state units in danger of fragmentation, reducing the importance of purely region units, influenced by distinct greater power interests.

In conclusion for this chapter, there is little to enumerate more on given the general agreement and consensus for strategic geography’s importance for a region to be classified as a shatterbelt. The occupation of key and emerging trade routes and the presence of significant strategic resources, both for now and the future, matches well to the resource profile of the Middle East in particular, with transportation nexuses and resources which greater powers are

dependent on being present. Even though the objective and perception of trade routes changes depending on the littoral geographic exposure of a nation state, there is enough evidence of securitisation, at least by regional players, as well as an almost complete securitisation of resources to mean this definition has applicability. The framing of climate change helps to open the definitional paradigm, compared to historical thought on the spatially locked nature of geography.

Chapter IX: Characteristic Analysis - Great Power Competition

We finally come to the last the theme or characteristic proposed: 'Economic and or military involvement of two or more **competing** great powers that contribute to the political fragmentation or become the fault line of the shatterbelt itself'.

When assessing whether the Arctic is subject to two or more competing great powers, the research results were relatively unanimous. All interviewees indicated that competition in the Arctic had been rising; interviewee A indicated that 'more tensions rising from climate change' were likely to occur amidst a combination of greater accessibility from climate change and a growing fracture in geopolitics between Russia and the West, which has seen the 'pendulum swing towards contestation', according to interviewee B (Interviewee A 2022; Interviewee B 2022). The other interviewees (C, D) also identified that 'competition had intensified' and cooperation was not likely to carry on in the same format or framework as before, especially since Russia's invasion of Ukraine and its rapid ostracization from most multilateral forums (Interviewee C 2022; Interviewee D 2022).

Triangulation amidst policy documents was also relatively unanimous in agreeing that great power competition was alive and well. Russia, unsurprisingly, through their framing of the 'national interest', view the need to enhance the 'international competitiveness' of the Russian Arctic's infrastructure relative to other global trade players, especially in the realm of international seaports and regional infrastructure designed to enhance connectivity (Russian Federation 2020). These include expanding the Commercial Seaport at Murmansk to handle larger tonnage cargo and ships, as well as developing transportation infrastructure across the Pechora River between Naryan-Mar and Usinsk, a stretch of territory historically underdeveloped (Russian Federation 2020). Militarily, whilst the latest Russian strategy is light on details, interviewee C indicated that massive Russian expansion of troop and aircraft capacities on Rogachevo base, on the remote island of Nova Zemlya, as well as 'new runways, radars and air and missile defence systems' on the northernmost airbase at Nagurskoye are clear demonstrations that the Russians feel either exposed in the North by NATO capabilities and/or see an opportunity to enhance deterrence capabilities. (Interviewee C 2022; Kjellén 2022: 41; O'Connor & Jamali 2022).

The USA also clearly frames their security strategy as a response to Russian and Chinese activity in the region, describing it as the 'central problem' for American and NATO security. (United States Army 2021: 15). Plans to construct three new icebreakers by 2027, the stationing of more nuclear-capable B-1 bombers at NATO operating base, Ørland, in Norway and Secretary of Defence, Lloyd Austin's recent lineation of Arctic stability to reducing Russia's threat globally to US power projection capabilities reinforces the viewpoint from the interviews that a new security dilemma is developing (O'Connor & Jamali 2022).

Even for states which typically view the Arctic in more integrative terms, there is a recognition of the inevitability of great power competition. Both Norway and Canada directly identify the growth in provocative activity from Russia. Norway highlights a need to expand independent power projection capabilities, with further deployment of troops to the region and the potential construction of a new nuclear-powered, cold-weather destroyer a clear indication of the concern that requires strengthening both within and outside NATO frameworks, frameworks which Nordic countries more widely have allowed to historically dominate their hard security capabilities in the region (Norwegian Ministries 2020: 23).

Canada supports further military power projection capabilities to safeguard Canadian economic interests amidst a lack of clarity over the alignment and objectives of rivals like Russia and China; this seems to be the reason why Canada proposed expanding the presence of Canadian Armed Forces to new bases in Resolute Bay and Nunavut, all inside or very near to the North-West Passage air defence zone (Government of Canada 2020: 7). Clearly, the viewpoint from national capitals is one of preparedness in response to more overt military and economic activities from strategic rivals, another example of a developing security dilemma (Cepinskyte & Paul 2021).

However, when interviewees were asked about the future military build-up, answers became more fragmented. Economic competition in the region was almost seen as a given, with all interviewees mentioning this as the long-term driver of contestation more broadly. As discussed in the previous chapters, the region is home to vast amounts of key resources, vital both for today and in the future, attracting states in search of resource security (Dittmer et al. 2011: 204). Moreover, the growing commercial viability of trade routes is attracting many states, to both mitigate strategic risks of using established trade routes (clearly demonstrated

by the blockages in 2021 to the Suez Canal and the impact on trade-flows) and increase domination of a global sea lanes (Supply Chain Council of the European Union 2020).

Climate change has also acted, in part, to enhance competition by increasing accessibility to the region, again as discussed in the previous chapters. Economic competition by interest-based great powers, like China, in order to gain access to fossil fuel reserves is a classic facet of shatterbelt behaviour (Venier 2011). A region only becomes an active shatterbelt, when its position as an economic or trade lynchpin for wider geopolitical interests gains the attention of great powers; without it, it would only be regional conflict (Cohen 1982: 237). Certainly, concerns and interests for the powers of Russia, China and the USA have encouraged each one to expand their desire for growing footholds in the region, especially considering the economic potential of the Arctic.

However, the future of military build-up in the region is a contested concept. The first reason area of pushback was regarding the role of objectives, as highlighted by interviewee C (Interviewee C 2022). State leaders, according to shatterbelt theory, are driven by their perceptions of the strategic importance of a region (Kelly 1986: 171). It thus becomes necessary to pre-emptively increase military and security capabilities for fear of a rival gaining greater positioning if the state does not act (Kelly 1986: 173). This is heavily based on realist thinking and the subsequent security dilemma can only exist if all state leader's priorities and behaviours match this distributive mindset (Guzzini 2012: 29).

Whilst the USA and Russia are focused heavily on ramping up military capabilities in the region, states with a more integrative approach maintain a focus on deconfliction. Sweden is a great example, using their leadership in Euro-Atlantic forums to bring closer Russia and NATO powers. This included using their presidency of the Northern Dimension Environmental Partnership to get EU member state funding for water and nuclear waste treatment programmes in Kaliningrad and the Kola Peninsula, with the aim of embedding Russia deeper into Western development and financing to help increase institutional interdependence, a key objective for Sweden's doctrine of balancing Arctic actors (Government of Sweden 2020: 15-18). The maintenance of a military hotline between Helsinki and Moscow to prevent any misunderstandings from escalating, as well as the framing of rampant military escalation as a risk to stability, demonstrates that front-line states in any conflict between Russia and the West pushes perceptions that limiting military

presences in the region is vital to limiting the degradation of strategic interests of those countries (Kelly 1986: 172; Østhagen 2020). Finland says any tension build up 'must be avoided', for fear of triggering a cascade of triggers which could worsen the security and stability that has defined the region (Government of Finland 2021: 17). Norway also highlights the need to balance their military presence with deconfliction and trust-building exercises with Russia, as well as not provoking Russia into aggressive behaviours by limiting their own military build-up (Norwegian Ministries 2020: 17).

Another reasoning is the structural impediments that exist as the sea-ice retreats and the region becomes more navigable. The big issue is that the Arctic has a lack of unclaimed physical landmasses; interviewee B argued that disputes such as those over Hans Island represent a tiny proportion of Arctic land territory (Interviewee B: 2022). Indeed, within shatterbelt theory, the availability and presence of physical land to allow for power projection and the positioning of military installations is a key determinant factor in whether a shatterbelt can be classified as one or not (Hoffman 1952: 273-274).

One could counter-argue that, especially based on Spykman's Rimland theory, a shatterbelt does not need physical land for power projection (Spykman 1944: 25). The appearance of the Mediterranean Basin, Atlantic Ocean and Arabian Gulf as neighbouring contested regions around the maritime 'Rimland' of Eurasia in his work could give evidence that the Arctic being a large body of water would not exclude it from being the focus of a security dilemma and great power contestation, especially considering the projection capabilities which stem from modern navies and air forces (Dijink 1996: 13). The Russian introduction of a new, fifth Joint Strategic Command into its Northern Fleet, as well the likely commissioning of a new class of 7,000 tonne ice-reinforced patrol vessels in 2023-2024, demonstrate a trajectory of enhancing naval capabilities to operate unencumbered through the Arctic (Kjellén 2022: 44). The US expansion of the Joint Alaska Range Complex to accommodate additional parachute and specialist ordinance regiments as part of the US Army Alaska (USARAK), could be seen as the Americans attempting to also enhance the scope and ability of their own naval power-projection capabilities (Joint Base Elmendorf-Richardson 2022).

Interviewees also confirmed this, with interviewee C arguing that the environmental conditions present the largest obstacle to any form of power projection (Interviewee C 2022). With temperatures that can reach -65 degrees Fahrenheit, the US Army for example, admits

that despite future scaling up to its USARAK's Cold Weather Indoctrination Course, new low-temperature ammunition rounds and the introduction of a fully functioning sub-zero battle tank, the terrain and climactic conditions represent the biggest operational risk (United States Army 2021: 5). In late 2021, Russia had to send two icebreakers to free 21 Russian vessels in the East-Siberian Sea, with reports that even the military-grade design of the icebreakers was little match for the thickness of the sea ice (Staalesen 2021c; Kjellén 2022: 42-45).

Despite global warming, it is expected that conditions will remain incredibly hostile and tricky for any naval assets, with Canadian military naval ports, such as the Nanisivik Naval Facility, not able to maintain a year-round strike or carrier group, which would be vital for naval power projection, due to limitations caused by permafrost (Pugliese 2014). This is also a concern for Russia, who has seen around 40% of all state infrastructure damaged by permafrost thaw and in need of desperate upgrade (Kertysova & Ramnath 2021). What is clear, is that whilst it is difficult to predict the future, the current inhospitable conditions of the region, lack of unclaimed land-based geography and vastness of the body of water to be covered by militaries create several structural impediments to rampant military escalation, putting a dent in the idea that the Arctic could qualify as a shatterbelt based singularly on this factor.

Whilst the impediments to military build-up regionally are evident, the current levels of competition between great powers, as well as their presence from an economic position, demonstrate a clear tilt towards shatterbelt behaviour. A factor which may strengthen this position even more is the current situation in Ukraine. The breakdown of Arctic cooperation and vociferousness of the fracture growing between the West and Russia might risk the ending of the exceptionalism of Arctic geopolitics, a point also highlighted by interviewees A and D (Interviewee A: 2022; Interviewee D: 2022; Seethi 2022).

The recent considerations of Sweden and Finland, historically neutral, in joining NATO might have ripple effects in the Arctic (O'Connor & Jamali 2022). Neither the policy documentation of Sweden nor Finland indicate a desire to apply for member, yet they were both written prior to 2022. What is striking is that, despite their history of neutrality, Finland does recognise that the Arctic as being far less stable currently, especially after Russia's 'illegal' annexation of Crimea (Government of Finland 2021: 18). These nations do

appreciate the need to be neutral and balance rival power blocs, indicating that the political fragmentation of states caught between great powers was previously held back for wider stability concerns. However, the paradigm shift of 2022 has seen a flip of this, with fragmentation now occurring in earnest, amidst Helsinki and Stockholm's joint decision.

Expanding Russia's borders with NATO members would push Russian deployments all the way inside the Arctic Circle in continental Europe, thus extending the European 'iron curtain' into the Arctic region, something which the Cold War had avoided. Such spill over, whilst again hard to predict, could have devastating consequences in forcing a Russian, then a NATO response, perhaps through a greater military presence ie. carrier strike groups on more permanent missions regionally or even a movement of nuclear capabilities within range of the Russian Arctic coastal installations. This acceleration of the security dilemma means that a greater risk of miscalculation and even open conflict erupting, ending the idea that the Arctic is inoculated to wider geopolitical currents.

The current state of the Arctic seems to lean, when considering the other chapters, towards accelerating competition. Whilst it can be disputed regarding the limits of military build-up and the existence of a security dilemma, the fierceness of the economic contestation and the strong positioning of three great powers in the region across an evident and growing fracture would seem to point to this characteristic growing in applicability to the Arctic region.

The next chapter will assess the limitations of this thesis and offer concluding thoughts as well as avenues of further research and exploration.

Chapter X: Concluding Thoughts

Limitations & Areas of further research

When looking to tie everything together, the scope and potential limitations of this thesis should be discussed. Regarding the methodology, the availability and salience of policy researchers on the topic of Arctic geopolitics/shatterbelts was limited within the short timeline of this thesis. For the future, more interviews should be conducted, expanding the scope of those being interviewed to national and multilateral policymakers, theoretical academics as well as insights from the ground and communities impacted by changing geopolitics. Only with this can a more detailed picture be painted; this thesis only wished to open the debate on shatterbelt reconceptualization – its completion is contingent on the findings being developed and challenged, especially if the Arctic no longer remains delineated from the conflict in Ukraine.

A second methodological issue was the lack of focus on quantitative analysis and factors. Authors such as Kelly, Hensel & Diehl work with empirical data and analysis to track violent conflicts and political agreements. This thesis wanted to explore the thematics and attempt to begin theoretical reconceptualization. As climate data grows year on year, further research on tracking conflicts in the Arctic or globally will be necessary to see how a) the Arctic develops and b) its comparability with other global shatterbelts within a contemporary lens and c) whether a correlation and causality exists with say, less sea-ice and more tensions/incidents in the region.

Another limitation of this thesis is that the triangulation focuses on only the most recent policy documentation from Arctic actors. This was done as this thesis wanted to mainly use these sources to triangulate the responses from interviewees and given the entropic nature of modern geopolitics, the latest viewpoints were the most time-relevant for the interviewee responses. For future research on the progression of the Arctic as a potential shatterbelt, more congruence analysis could be conducted on a wider temporal selection of Arctic strategies, at a local, national and multilateral level for a wider scope of analysis.

Finally, using the Arctic as a single case study only helps understand shatterbelt applicability in one instance. For this, using an exceptional climatic polar region means that it is tricky to

apply to other regions which may be less susceptible to the rapid changes in climate and is more land-based in geography, meaning structural fluctuations are typically slower. A comparison to another potential regional hotspot, maybe around the South China Sea, could add more value to the framework established.

Conceptions shattered?

It is hard to end this research with a definitive conclusion. The first point to make, is that whilst climate change is contested in its nature, especially in relation to competition and cooperation, applying an environmentally friendly lens to traditional or existing shatterbelt conceptions is a strong start to understanding how for example, resource and trade lane control is impacted by structural adaption, in part caused by human actions. Spatially fixed discussions of shatterbelts do not include how the existential frames the national viewpoint of a geopolitical rivalry; the interviews and policy documents are unanimous in identifying that the nature of cooperation and contestation is framed more and more by climate change in the Arctic. Understanding Arctic exceptionalism and how unrivalled competition is checked is more insightful from a climate lens, and thus the dynamics that fuel conflict in a shatterbelt are enhanced; a similar trend has slowly been occurring within wider geopolitics and as such this is a necessary step for re-introducing shatterbelts as a mainstream or publicly engaged concept.

Moving onto the central question of this thesis, it cannot be definitively concluded that at this moment in time, the Arctic is a shatterbelt, especially under the new theoretical characteristics proposed. Whilst the climate change lens removed certain impediments such as the necessary involvements of external powers and spatial determinism, the main obstacle remains in the applicability of fragmentation on a regional basis. Shatterbelts are characterised by discord and distrust amidst national units in a region, with lessening ideological, political, economic or social connectivity and high degree of tensions in the absence of deconfliction or progressive cooperative frameworks to diffuse said tensions.

The fact of the matter remains, is that whilst Arctic strategic geography is vital for great power projection and competition, both regionally and globally, the nature of Arctic fragmentation means that it has a dual personality, where cooperation to mitigate the existential risks of climate change meets the growing entrenchment of national interests and

tacit resource and wider strategic competition. This is vastly different from the more binary nature of contestation which defined 20th century shatterbelt definitions. Whilst arguments could be made as to modern political fragmentation being more complex as interests are far more interlinked on more levels than they were 50 years ago, the nature of shatterbelt fragmentation differs from regular fragmentation as the conflict that erupts is often of a higher intensity and in the periods of calm, state actors seldom engage proactively with one another. The lack of convergence with the shatterbelt fragmentation, means that under the current research, the Arctic, whilst demonstrating shatterbelt behaviour, does not operate under the necessary conditions to be classed as one at this current point in time.

Additional definitional issues occur when discussing military build-up and escalation, which whilst not being exponential, have a greater potential to occur on land-based geography, whereas the Arctic, with shifting sea-ice, non-permanent geography, extreme weather and a general lack of unclaimed physical territory where military assets can be installed, all mean that military power projection may have definitive limits. Finally, whilst Russia is seemingly less disposed to climate protection, the West is still keen to adapt and mitigate, as public and security concerns over climate degradation pervade deeper into societal consciousness. As such, rampant escalation for both economic and military activities may still be limited for wider, existential sustainability issues, presenting a political barrier.

However, the big elephant in the room is the war in Ukraine. As climate change opens regions to more exploitation and wider engagement, it becomes less delineated from other geopolitical issues and tensions. The most recent actions by the West, especially in relation to excluding Russia from cooperative forums in the Arctic, mean that even the strongest skeins of cooperation within climate action, will be hamstrung by the political divisions. This helps to, in the future, potentially create a situation where a single fracture occurs between two geopolitical groupings, which would be a stronger fragmentative behaviour under shatterbelt conditions. However, this is a predictive statement, and a wary eye must be kept on this, not for the least to help deconflict the Arctic and maintain the ‘negative peace’, for fear that the escalation of new geopolitical tensions will spill over to the Arctic, further threatening global stability.

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