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MASTER OF MILITARY STUDIES

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Reinforcing United States Naval Arctic Strategy Through Catalytic Force

SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF MASTER OF  
MILITARY STUDIES

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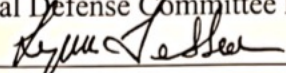
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## Executive Summary

**Title:** Reinforcing United States Naval Arctic Strategy Through Catalytic Force

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**Thesis:** United States strategy in the increasingly important Arctic must be reinforced through catalytic force. Maritime all domain access and enhanced security partnerships with Arctic nations are the key tenets of such force.

**Discussion:** The Arctic is quickly becoming more strategically important to the United States due to the shifting geography and growing access to valuable natural resources. Natural resources and sea lines of communication will become available, and legally and politically contested. Planning and thoughtful resourcing should begin now in order to prepare adequately for this new global dynamic. This has been a problem since the discovery that Arctic ice has been melting at a rate that will open up vital sea lines of communication to commercial and military maritime traffic by the 2030s. The unique capability of U.S. naval forces allow for a potential solution to a future, unknown problem.

Catalytic Force allows policy-makers and strategists time for more informed decisions without a great deal of risk. Under James Cable's umbrella term of Gunboat Diplomacy is Catalytic Force, explained as "the use of force for vague purposes." Cable goes on to explain that "a situation arises offering obscure opportunities. Something, it is felt, is going to happen, something that somehow might be prevented if force were available at the critical point." This model of strategic employment is directly applicable to the changing Arctic.

The U. S. Intelligence Community (IC) indicated that Vladimir Putin will seek to assert his authority on the global stage through competition with the United States in areas not in direct competition, like the Arctic. Additionally, China's interest and presence in the Arctic has been steadily growing. It has observer status on the Arctic Council but has continued to assert their status as a "near-Arctic" nation with certain legal rights. Their interests lies in those areas similar to Arctic nations, including the opening of shipping routes, natural resources, and the military potential of the region.

**Conclusion:** The Arctic is peaceful and has been consistently characterized by cooperation, partly through the Arctic Council acting as a responsible body of governance. Both Russia and China are investing heavily in the region and elevating the Arctic's importance within their respective national security structure. If the United States does not act decisively to match the verbiage in its own policy it will lose the necessary decision space for future unknown events.

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## Introduction

The Arctic is quickly becoming more strategically important to the United States due to the shifting geography and growing access to valuable natural resources. Natural resources and sea lines of communication will become legally and politically contested as the Arctic ice melts. This has been a problem since the discovery that Arctic ice has been melting at a rate that will open up vital sea lines of communication to commercial and military maritime traffic in the next several decades.<sup>1</sup> Within this strategic context, this paper provides more specificity on the current maritime implications and challenges for U.S. naval forces in the Arctic region; the geostrategic importance of the Arctic to the U.S.; and how U.S. naval forces can reinforce U.S. strategy in the Arctic.

United States naval strategy in the Arctic environment must be reinforced using *Catalytic Force* through maritime all domain access and enhanced maritime security partnerships with Arctic nations. The U.S. naval forces are uniquely positioned to address these elements and positively influence fragile security relationships with competing powers, specifically Russia and China.<sup>2</sup> The Arctic is a maritime environment from a geographic and legal perspective. Its rise in importance due to diminishing ice coverage has already drawn in world powers, most notably Russia and China.<sup>3</sup> The U.S. Air Force and Army both have considerable interests in the Arctic

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<sup>1</sup> Ronald O'Rourke. *Changes in the Arctic: Background and Issues for Congress-Updated*. CRS Report for Congress R41153 (Washington, DC: Congressional Research Service, December 13, 2018), 6-12, <https://fas.org/sgp/crs/misc/R41153.pdf>.

<sup>2</sup> The US Navy defines all domain access as the ability to project military force in contested areas with sufficient freedom of action to operate effectively; James Cable defines Catalytic Force as the use or threat of limited naval force, otherwise than an act of war, in order to secure advantage or to avert loss, either in the furtherance of an international dispute or else against foreign nationals within the territory or jurisdiction or their own state.

<sup>3</sup> Rachael Gosnell. "The Complexities of Arctic Maritime Traffic." *The Arctic Institute*, January 30, 2018. <https://www.thearcticinstitute.org/complexities-arctic-maritime-traffic/>.

region, but this analysis will focus on U.S. naval equities and shortfalls in implementing the U.S. government's strategy in the new Arctic region.

This paper seeks to fill the gap in the academic literature by connecting James Cable's theory of *Gunboat Diplomacy* to the future Arctic environment. The literature has not addressed this important intersection of maritime strategy and the U.S. national security challenges associated with a changing Arctic. This is likely due to the unknowable nature of the future Arctic environment, which is precisely what Cable addresses in his concept of *Gunboat Diplomacy*. John Andreas Olsen tangentially addresses this intersection by analyzing NATO's collective defense in the North Atlantic, but the connection is limited. There are loose analogies to draw from when shifting the geography from the North Atlantic to the Arctic since many of the players involved are the same, making the geopolitical stakes similar.<sup>4</sup> However, this connection is only helpful to a certain extent; *Gunboat Diplomacy* can be helpful in charting a viable course for U.S. strategy in the Arctic.

The link between naval action and political influence is further explored by Cable. He asserts that naval influence is not just limited to pitched battles. Naval forces can and should operate in a continuum below the threshold of conflict. *Gunboat Diplomacy* as a naval strategy in the Arctic is a useful conceptual model. Cable argues that "the use or threat of limited naval force, otherwise than an act of war, [may be used] in order to secure advantage or to avert loss, either in the furtherance of an international dispute or else against foreign nationals within the territory or jurisdiction of their own state."<sup>5</sup> Cable readily admits that the term itself is amorphous. It eludes simple explanation as it is a political instrument used for purposes short of

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<sup>4</sup> John Andreas Olsen, ed., *NATO and the North Atlantic: Revitalizing Collective Defence*. Whitehall Papers Series (London: Royal United Services Institute for Defence and Security Studies, 2017), 3-7,

<sup>5</sup> James Cable, *Gunboat Diplomacy 1919-1991: Political Applications of Limited Naval Force*, 3rd Edition (New York: St. Martin's Press, 1994), 12-14.

war, or limited war.<sup>6</sup> Limited war exists in the grey area between politics and war making it important in avoiding wider conflict.

There is an extensive body of academic research focusing on the security implications of the changing Arctic environment. The preponderance of this work is devoted to the broader geopolitical implications of melting sea ice and how the Arctic nations are affected. Most of it arrives at a consensus that this issue has wide ranging consequences; the divergence is in the recommended solutions.<sup>7</sup>

With other more pressing U.S. strategic priorities it makes little sense to unintentionally provoke Russia and potentially upset Arctic allies by militarizing the region. United States military involvement in the Arctic can also serve to unbalance long-standing negotiations over contested borders and rights to natural resources. Military presence or rhetoric will not bring certainty to the geographic, legal, and political landscape in the Arctic. There is also a real risk of unintended escalation if U.S. naval forces were viewed by Russia or China as aggressive. Despite a well-crafted and nuanced message, one can never know how actions will be perceived.

This paper seeks to fill a gap in the existing literature by using Cable's model of *Catalytic Force* to provide a strategic path for U.S. Naval forces in the Arctic. First, by outlining the current legal, political and geographic Arctic environment to underscore the strategic importance. Next, by analyzing the players, specifically Russia and China, it will provide a background for understanding how *Catalytic Force* applies to the Arctic in the current context of

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<sup>6</sup> Ibid., 11-12.

<sup>7</sup> National Snow and Ice Data Center. *All About Arctic Climatology and Meteorology*. University of Colorado at Boulder, 2019. <https://nsidc.org/cryosphere/arctic-meteorology/index.html>; Agnieszka Gautier. "New Year Lows Once Again." *National Snow & Ice Data Center-Arctic Sea Ice News & Analysis*, January 7 2019. <http://nsidc.org/arcticseaicenews/2019/01/new-year-lows-once-again/>; Ronald O'Rourke. *Changes in the Arctic: Background and Issues for Congress-Updated*. CRS Report for Congress R41153 (Washington, DC: Congressional Research Service, December 13, 2018), 19-21, <https://fas.org/sgp/crs/misc/R41153.pdf>.

global politics. Finally, it will use past and present U.S. and naval strategy to provide a cohesive narrative that is the precursor to a potential solution for naval force in the Arctic.

### **A Strategic Path for U.S. Naval Forces in the Arctic: *Catalytic Force***

There is scientific data on the changing Arctic as well as evidence of competitors seeking to gain influence at the behest of the U.S. and its allies. Despite this, the future environment can never be fully known. *Catalytic Force* allows policy-makers and strategists time for more informed decisions without a great deal of risk. Under Cable's umbrella term of *Gunboat Diplomacy* is *Catalytic Force*, explained as "the use of force for vague purposes." Cable goes on to explain that "a situation arises offering obscure opportunities. Something, it is felt, is going to happen, something that somehow might be prevented if force were available at the critical point."<sup>8</sup> Because of its diplomatic nature it can be somewhat ambiguous if its intent is not clearly signaled to the international community but it also can be a useful diplomatic tool.

The third edition of Cable's work describing *Catalytic Force* was written as the Cold War was coming to an end in the early 1990s coloring his view of the world. He draws on case studies spanning the first half of the twentieth century to underscore the validity of *Catalytic Force*. First, he points to the instability throughout Europe at the end of World War I in 1918, particularly in the Baltic states. The British dispatched a naval squadron to the region with the hope that it would enhance its political position and forestall Bolshevik ambition. The naval commanders were given limited and vague guidance for their conduct. The objectives changed as the conflict on land ebbed and flowed, but ultimately Estonia, Finland, Latvia, and Lithuania emerged as independent countries. Limited naval warfare, as practiced through *Catalytic Force*, likely played a supporting role in this complex situation.

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<sup>8</sup> James Cable, *Gunboat Diplomacy 1919-1991: Political Applications of Limited Naval Force*, 3rd Edition (New York: St. Martin's Press, 1994), 46.

Next, Cable uses the U.S. intervention in Lebanon in 1958 as an example. Concerned by Arab nationalism, mostly from Egypt and Syria, Lebanon sought assistance through the U.S. Ambassador. The U.S. Sixth Fleet and the Second Provisional Marine Force (Task Force 62) were put on alert. During this time sporadic violence led to a civil war, largely divided among religious lines. The U.S. administration wanted to adhere to the tenets of the Eisenhower Doctrine but not get dragged into a messy civil war with no clear end state. The Lebanese president eventually requested U.S. assistance and Marines were landed and secured the airport in Beirut. The Marines that went ashore did not have a clear military objective; they were sent to provide decision space for the Lebanese and American governments. A compromise between both sides was achieved and the troops were unceremoniously withdrawn.<sup>9</sup>

Both of Cable's examples of *Catalytic Force* were far more violent and required a more immediate response than that of the Arctic. Each situation is highly contextual, politically and militarily. *Catalytic Force* is not always appropriate because of local circumstances. Cable's interpretation of *Gunboat Diplomacy* is bounded by the realities of the Cold War, but there has been further study on what this means for naval forces in 2019. Hendrix and Armstrong build on Cable's idea of catalytic force and put it into current context. They define *presence* as a "culmination of influence, persistence, and effect brought to bear in regions of critical interest to our nation."<sup>10</sup> Cable understood that circumstances change; the implementation of *Catalytic Force* is meant to be descriptive, not prescriptive.<sup>11</sup> The practitioner is required to fully assess the situation and apply the applicable model for success.

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<sup>9</sup> James Cable, *Gunboat Diplomacy 1919-1991: Political Applications of Limited Naval Force*, 3rd Edition (New York: St. Martin's Press, 1994), 47-61.

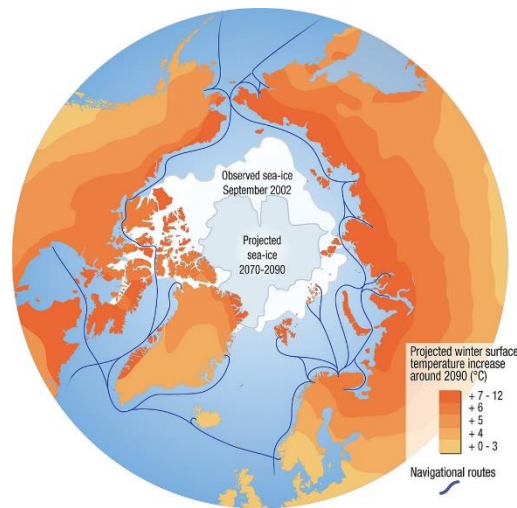
<sup>10</sup> Jerry Hendrix and Benjamin Armstrong, *The Presence Problem: Naval Presence and National Strategy*, (Washington, DC: Center for a New American Security, 2016), 12, [www.jstor.org/stable/resrep06208](http://www.jstor.org/stable/resrep06208).

<sup>11</sup> James Cable, *Gunboat Diplomacy 1919-1991: Political Applications of Limited Naval Force*, 3rd Edition (New York: St. Martin's Press, 1994), 65-67.

The future Arctic environment is vague, meaning the political and territorial claims are rife with uncertainty. This uncertainty is the domain in which Cable intended *Catalytic Force* to be of the most use to politicians. Introducing security (and military) matters into the equation will invite disruption to the balanced calm the Arctic Council has provided. This hope that competitors will continue to act in the best interests of all Arctic countries carelessly dismisses the utility of naval forces.

The alternative approaches to the security situation in the Arctic is to maintain the status quo or cede this important domain to the Russians. Neither is optimal in providing long-term solutions to the inevitable security dilemma faced by Arctic countries. Cable's concept of *Catalytic Force* can be used for de-escalation by modulating the purpose and presence of naval forces in the Arctic. Maintenance of the status quo means that important security matters will be ignored by the Arctic Council and only addressed bilaterally. Without this key outlet for transparent discussions there will likely be a higher risk of misunderstanding between the U.S., Russia, and the other Arctic Council members. If the path of disengagement, or allowing Russia to assert its dominance in the Arctic, is allowed this will also create risk and leave the Arctic and North Atlantic vulnerable.

## Arctic Environment



**Figure 1: Projected changes in the Arctic climate, 2090 - with shipping routes**

Source: GRID-Arendal.

<https://www.grida.no/resources/8350>

### Governance, Law, and Politics in the Arctic

The United Nations Convention on the Law of the Sea (UNCLOS) is the seminal document that governs nations operating in international waters and defines the maritime environment.<sup>12</sup> Initially, the primary consideration was the extent of the sovereign territory from a nation's coastline (usually 3 nautical miles). The seas outside of the 3 nautical mile zone were considered international waters. In the early 20th century this concept began to evolve to account for the technological capability to extract mineral resources, protect fish stocks, and protect the environment.

Within the provisions set forth by UNCLOS III, there are key points that apply to the unique Arctic maritime environment. Part VI of the convention, which addresses the continental shelf is particularly contentious as the sea ice melts in the Arctic and the area becomes more accessible

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<sup>12</sup> United Nations. *United Nations Convention on the Law of the Sea*. New York: Division for Ocean Affairs and the Law of the Sea, December 10, 1982.  
[http://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](http://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf).

to exploration and commercial shipping. This provides coastal states with sovereign jurisdiction over all resources. Nations are still required to scientifically prove their respective claims over their continental shelves. Additionally, the issue of defining an extended continental shelf are becoming more contentious with nations seeking to assert influence in the Arctic region with various claims.<sup>13</sup>

There is no government in the Arctic region; it is managed through the Arctic Council.<sup>14</sup> Established by the Ottawa Declaration in 1996, the Arctic Council has eight member nations: Canada, the United States, Russia, Norway, Sweden, Finland, Denmark, and Iceland. The declaration also granted observer status to “non-Arctic” states and some other non-governmental organizations with an interest in the region.<sup>15</sup> In practice the Arctic Council has no legal authority in the Arctic. The council also deliberately avoids security matters, leaving those to the Arctic Security Forces Roundtable which meets informally on an annual basis.

### **International Commerce in the Arctic Sea.**

The Arctic Circle has been examined by maritime experts as potentially a more economical route for maritime traffic and a way to avoid traditional maritime chokepoints. In 2017, 9.7 million tons of cargo were shipped through the Northern Sea Route, setting the highest annual volume up until that point. This was a growth in tonnage shipped since 2015 and 2016, with

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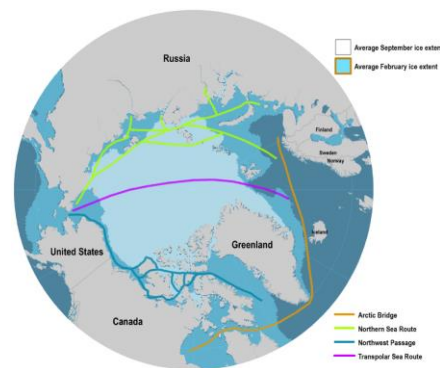
<sup>13</sup> Ronald O’Rourke, *Changes in the Arctic: Background and Issues for Congress-Updated*. CRS Report for Congress R41153 (Washington, DC: Congressional Research Service, December 13, 2018), 16-18, <https://fas.org/sgp/crs/misc/R41153.pdf>.

<sup>14</sup> The Arctic Council. *The Arctic Council: A Background* (Tromso, Norway: The Arctic Council Secretariat, 2018). <https://arctic-council.org/index.php/en/about-us>.

<sup>15</sup> Arctic Council. *Declaration on the Establishment of the Arctic Council* (Tromso, Norway: Arctic Council Secretariat, 1996). [https://oaarchive.arctic-council.org/bitstream/handle/11374/85/EDOCS-1752-v2-ACMMCA00\\_Ottawa\\_1996\\_Founding\\_Declaration.PDF?sequence=5&isAllowed=y](https://oaarchive.arctic-council.org/bitstream/handle/11374/85/EDOCS-1752-v2-ACMMCA00_Ottawa_1996_Founding_Declaration.PDF?sequence=5&isAllowed=y).

many maritime analysts expecting this number to continue to rise.<sup>16</sup> This is a minuscule number compared to other global shipping lanes but it represents a growing trend in the Arctic.

There are four potential sea routes in the arctic as shown in Figure 2: Northern Sea Route (NSR), Northwest Passage (NWP), Transpolar Route, and the Arctic Bridge. Due to minimal maritime domain awareness in support of emergency response, high insurance costs, long transit times, reliance on ice cutters, and an unknown physical environment these routes are not feasible for commercial traffic, yet but will open up due to ice melt.<sup>17</sup> Each of these maritime routes potentially serve different purposes and at varying stages of readiness for maritime traffic.<sup>18</sup>



**Figure 3: Polar Shipping Routes**

Source: Jean-Paul Rodriguez, “The Geography of Transport Systems,” New York: Routledge, 2017, [https://transportgeography.org/?page\\_id=412](https://transportgeography.org/?page_id=412).

## Scientific Discoveries and Natural Resource Exploration

In 2008 the United States Geological Survey (USGS) completed an assessment of undiscovered oil and gas resources throughout the Arctic Circle. The report estimated that 90

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<sup>16</sup> World Maritime News. “Northern Sea Route Handles Record 9.7 Mn Tons.” January 23, 2018. <https://worldmaritimeneews.com/archives/241571/northern-sea-route-handles-record-9-7-mn-tons/>.

<sup>17</sup> Rachael Gosnell. “The Complexities of Arctic Maritime Traffic.” *The Arctic Institute*, January 30, 2018. <https://www.thearcticinstitute.org/complexities-arctic-maritime-traffic/>.

<sup>18</sup> American Bureau of Shipping (ABS), *IMO Polar Code Advisory* (Houston, TX: World Headquarters, 2016), 5. [https://ww2.eagle.org/content/dam/eagle/advisories-and-debriefs/ABS\\_Polar\\_Code\\_Advisory\\_15239.pdf](https://ww2.eagle.org/content/dam/eagle/advisories-and-debriefs/ABS_Polar_Code_Advisory_15239.pdf).

*billion barrels of oil, 1,669 trillion cubic feet of natural gas, and 44 billion barrels of natural gas liquids may remain to be found in the Arctic, of which approximately 84 percent is expected to occur in offshore areas.* The assessment was based on only those resources that were believed to be recoverable using existing technology, but without regard for the state of the sea ice and water depth. The vast, mostly unexplored Arctic, comprises most of the remaining prospective petroleum on Earth. Of the 21 million square miles of the Arctic, almost 7 million square miles is offshore on the continental shelves under less than 500 meters of water.<sup>19</sup>

The clear monetary and strategic benefit to the extraction of these resources is at the forefront of minds of the Arctic nations as well as budding global powers like China and Russia. Even before the USGS report was published there has been concerted efforts to shape the legal definitions of the maritime environment as well as survey it to discover the potential under the sea ice. Many countries have continued exploration either by themselves or with cooperation from other Arctic countries. There is also a relatively long-standing scientific presence in the Arctic that has been largely characterized by mutual cooperation among nations--even between Russia and the United States.

### **Arctic Players**

**Russia in the Arctic.** Within this framework most assert that Russia is indeed cooperating and intransigent actions by any of the Arctic states, especially the U.S. is not helpful to the current status quo.<sup>20</sup> Maintaining the current governance architecture and continuing the

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<sup>19</sup> US Geological Survey (USGS). *Circum-Arctic Resource Appraisal: Estimates of Undiscovered Oil and Gas North of the Arctic Circle* (Washington, DC: US Geological Survey, 2008), 1-4, <https://pubs.usgs.gov/fs/2008/3049/fs2008-3049.pdf>.

<sup>20</sup> Mikkel Runge Olesen, *Arctic Rivalries: Friendly Competition or Dangerous Conflict?* (Copenhagen, Denmark: Danish Institute for International Studies, 2017), 1-13. [www.jstor.org/stable/resrep13308](http://www.jstor.org/stable/resrep13308).

peaceful cooperation among Arctic Council members is professed to be the optimal solution.<sup>21</sup> If the U.S. gives indications that it is asserting maritime dominance in the Arctic it will likely lead to corresponding Russian military escalation. Conversely, Russia's military expansion in the Arctic does not constitute a desire to engage in conflict. It is likely more indicative of its desire to maintain a military presence to protect its large Arctic coastline and safeguard other national interests unrelated to militarism. There is a strong historical precedent for Russia working through treaties, alliances, and committees within the Arctic region.<sup>22</sup> Russia has worked productively in this system of governance as an honest partner.

Geir Honneland describes Arctic politics as uniquely regional, but with far reaching global consequences. These consequences have provided cover to a specious argument that military action is required. The characterization of Russia as belligerent actor seeking dominance in the Arctic does not coincide with reality.<sup>23</sup> Rowe reinforces the efficacy of the Arctic Council's brand of governance through specific examples of how the council has improved security by resolving other important matters. Offerdal points to the improved "regulatory and enforcement competence regarding the use of resources and sea lanes of communication," and "diverting states from existing disputes that might otherwise escalate into conflict."<sup>24</sup>

Russia is likely using Cable's model of *Catalytic Force* to advance its goals in the Arctic. There are legitimate economic and security concerns that Russia is facing, but its actions also indicate a signal to NATO, the Arctic Council and western competitors that it is preparing for the

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<sup>21</sup> Stephanie Pezard, *Maintaining Arctic Cooperation with Russia: Planning for Regional Change in the Far North*. (Santa Monica, California: Rand, 2017), 59-62.

<sup>22</sup> *Ibid.*, 22.

<sup>23</sup> Geir Honneland, *International Politics in the Arctic: Contested Borders, Natural Resources and Russian Foreign Policy* (London: I.B. Tauris & Co, Ltd., 2017), 1-7.

<sup>24</sup> Elana Wilson Rowe, *Arctic Governance: Power in Cross-Border Cooperation* (Manchester, United Kingdom: Manchester University Press, 2018), 124-125; Rolf Tamnes and Kristine Offerdal, eds. *Geopolitics and Security in the Arctic: Regional Dynamics in a Global World* (New York: Routledge, 2014) 73, 140-141.

future. Putin is using diplomatic, informational, military, and economic means to better position Russia. In doing so he is reducing risk of wider confrontation and lengthening the time needed for the situation to develop.

The U. S. Intelligence Community (IC) did not specifically characterize Russian activity in the Arctic region in the 2018 Worldwide Threat Assessment but they indicated that Vladimir Putin will seek to assert his authority on the global stage through competition with the United States in “outer areas.” The report further elaborates that Russia will likely “use a wide range of relatively low-cost tools to advance its foreign policy objectives, including influence campaigns, economic coercion, cyber operations, multilateral forums and measured military force.”<sup>25</sup> The Arctic has the potential to either act as a catalyst for an escalation of global conflict between the United States and Russia or as a constructive forum for cooperation.

Russia is in the process of submitting a request to the Commission on the Limits of the Continental Shelf to extend the outer limits of its continental shelf, including the Lomonosov Ridge, which extends almost the entire distance through the center of the Arctic Ocean. It has spent considerable effort in charting the ridge. In 2007 a Russian submersible embedded a flag on the seabed at a site that they believed to be the North Pole. It does not constitute any binding legal claim to an area but it shows the desire for Russia to assert its authority in the Arctic. To further complicate matters Russia potentially has an overlapping extended continental shelf with the United States and Canada. In 2015 Russia updated the submission to the Arctic Council

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<sup>25</sup> Office of the Director of National Intelligence, *Statement for the Record: Worldwide Threat Assessment of the US Intelligence Community*. Office of the Director of National Intelligence, February 13, 2018), 23-24, <https://www.dni.gov/files/documents/Newsroom/Testimonies/2018-ATA---Unclassified-SSCI.pdf>.

seeking recognition of the Mendeleev Rise as part of their continental shelf, however, there has not been a ruling on this.<sup>26</sup>

Russia is also increasing focus and investment on the Northern Sea Route and the Northwest Passage for commercial shipping. It is seeking to reserve the transport of oil and gas extracted along the NSR to Russian-flagged ships.<sup>27</sup> The Arctic sea ice on the Russian side of the Arctic along the NSR is melting more quickly than on the Canadian side of the Arctic (Northwest Passage).<sup>28</sup>

From a military perspective, Russia is also expanding its presence in the Arctic region, even announcing intent to take action to enhance its military presence in the High North. Putin has made troubling statements about military expansion in the Arctic but his rhetoric has been backed up by his actions. There are forty Russian icebreakers (with a dual-use purpose) for the Arctic and six new Russian military bases with S-400 anti-aircraft missile systems. These bases are in addition to the already existing infrastructure facilitating air, maritime, and exploration operations. The Russian Ministry of Defense has also invested in an Arctic ground presence.<sup>29</sup> Relative to the United States military, the Russian presence in the Arctic is minimal but significant nonetheless. Logistical challenges remain to feed, clothe, and maintain the personnel and bases spread throughout the Russian frontier. However, their presence continues to grow and provides the capability, albeit limited, to underwrite Russian claims in the Arctic, some of which are pending.

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<sup>26</sup> Joanna Hosa, "Has Russia Already Won the Scramble for the Arctic?" *The Maritime Executive*, October 28, 2018, <https://www.maritime-executive.com/editorials/has-russia-already-won-the-scramble-for-the-arctic>.

<sup>27</sup> Pavel Devyatkin, "Russia's Arctic Strategy (Parts I-IV)" *The Arctic Institute*, February 2018, <https://www.thearcticinstitute.org/russias-arctic-strategy-aimed-conflict-cooperation-part-one/>.

<sup>28</sup> *Ibid.*

<sup>29</sup> Mark Episkopos, "How Russia Is Getting Ready for War in the Arctic." *National Interest*, December 2018, <https://nationalinterest.org/blog/buzz/how-russia-getting-ready-war-arctic-37667>.

Despite Putin's rhetoric and what seems like a militarization of the Arctic, Russian cooperation within the Arctic framework of governances has been constructive. Russia is a charter member of the Arctic Council and has considerable equities in the Arctic region. It has internationally recognized rights to a significant portion of the Arctic region and half of the four million people living in the Arctic are in Russian territory.<sup>30</sup> On the Kola Peninsula, where much of Russia's strategic deterrent assets are based, it is vulnerable.<sup>31</sup> This puts the country in a precarious position and is likely a partial cause of Russian interest in the Arctic. Additionally, Russia is a signatory of the Ilulissat Declaration in 2008, which the five Arctic nations agreed to peacefully resolve territorial disputes.<sup>32</sup> Russia is not the only competitor in the region asserting its legal and territorial rights.

**China in the Arctic.** China is unique when compared to other competitors in the Arctic environment. The amount of effort and resources expended on the Arctic does not fit with its proximity to the region. It is similar to Russia in that it is also likely using Cable's theory of *Catalytic Force* to reduce risk and increase decision making space for unknown future endeavors. Like other competitors China realizes the unlocked potential of the natural resources in the region as well as what new sea lines of communications will fundamentally change global politics.

China's interest and presence in the Arctic has been steadily growing. It has observer status on the Arctic Council but have continued to assert their status as a "near-Arctic" nation with certain legal rights. Its interest lies in those areas similar to Arctic nations, including the opening

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<sup>30</sup> National Snow & Ice Data Center, "Arctic People," October 24, 2018, <https://nsidc.org/cryosphere/arctic-meteorology/arctic-people.html>.

<sup>31</sup> Mikkel Runge Olesen, *Arctic Rivalries: Friendly Competition or Dangerous Conflict?* (Copenhagen, Denmark: Danish Institute for International Studies, 2017), 3, [www.jstor.org/stable/resrep13308](http://www.jstor.org/stable/resrep13308).

<sup>32</sup> *Ibid.*, 3-4.

of shipping routes, natural resources, and the military potential of the region as China looks to break out of its hegemony in the South China Sea. China is not geographically “connected” to the internationally agreed upon Arctic region, but this has not stopped Chinese academics from asserting their proverbial stake. Dr. Yang Jian of the Shanghai Institutes for International Studies and other senior officials in China dealing with the Arctic strategy essentially believe that the Arctic is a global domain that justifies their involvement in its governance.<sup>33</sup>

In January 2018 China released an Arctic Policy outlining their approach to the region. There are several key aspects within the strategy that should be heeded by the United States and its Arctic allies. Most notably, the reference to the Arctic as a component of the “Polar Silk Road” shows China’s assertive visions of a future Arctic environment. Regardless of China’s status on the Arctic Council Beijing believes the country is part of that “shared future for mankind” in the Arctic. Its specific policy goals are “deepening the exploration and understanding of the Arctic, protecting the eco-environment of the Arctic and addressing climate change, utilizing arctic resources in a lawful and rational manner, participating actively in Arctic governance and international cooperation, and promoting peace and stability in the Arctic.”<sup>34</sup>

China’s Arctic Policy is not just rhetoric directed at the international community. It is taking deliberate steps in bringing the efforts outlined in the policy to fruition. The China National Nuclear Corporation (CNNC), in a joint venture, is beginning construction on China’s first nuclear-powered icebreaker ship. The People’s Liberation Army Navy (PLAN) currently operates three icebreakers, as well a civilian icebreaker run by the Polar Research Institute of

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<sup>33</sup> Stephanie Blenckner, *China defines itself as a 'near-arctic state says SIPRI*, (Stockholm, Sweden: Stockholm International Peace Research Institute, May 10, 2012). <https://www.sipri.org/media/press-release/2012/china-defines-itself-near-arctic-state-says-sipri>.

<sup>34</sup> People’s Republic of China, *China’s Arctic Policy* (Beijing, China: State Council, January 26, 2018) [http://english.gov.cn/archive/white\\_paper/2018/01/26/content\\_281476026660336.htm](http://english.gov.cn/archive/white_paper/2018/01/26/content_281476026660336.htm).

China (PRIC).<sup>35</sup> This fleet of icebreakers will accelerate China's presence in the Arctic and gives them a valuable presence for military operations, scientific research, and natural resource exploration.

Additionally, China has continued its coercive economic presence in the Arctic, sometimes characterized as "grey zone" operations. In September 2018, Greenland and China began discussions to expand three airports. Last October the Chinese Academy of Sciences worked with Ocean Network Canada to install four underwater monitoring devices near Naval Base Kitsap all the way to the Arctic. Each of these venture when viewed independently could be considered benign, however, they are part of a deliberate effort on the part of China to strategically invest in infrastructure the benefits military and scientific purposes.<sup>36</sup>

**The "Other" Arctic Countries.** The Arctic is mostly characterized by the Arctic Council and the major powers, but its presence does not negate competition among nations. The U.S., Russia, and China stand out; but, Norway, Canada, the European Union, Denmark, Iceland, Sweden, and Finland all compete for power and resources in the Arctic. This is not unique or alarming; however, this does complicate consensus building among all parties. This competition, when viewed through the lens of *Catalytic Force*, allows for a deeper understanding of the political environment.

Among the Arctic countries, Canada and Norway stand out as influential stakeholders. Canada has the second largest coastline of all the Arctic countries making it a key player on the council and understandably concerned about its own national security agenda. Similar to the U.S. the Canadian government is updating existing policies to reflect domestic politics and changing

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<sup>35</sup> Trym Aleksander Eiterjord, "China's Planned Nuclear Icebreaker." *The Diplomat*, July 2018. <https://thediplomat.com/2018/07/chinas-planned-nuclear-icebreaker/>.

<sup>36</sup> People's Republic of China. *China's Arctic Policy*. (Beijing, China: State Council, January 26, 2018), [http://english.gov.cn/archive/white\\_paper/2018/01/26/content\\_281476026660336.htm](http://english.gov.cn/archive/white_paper/2018/01/26/content_281476026660336.htm).

global context. It is in the process of developing a new policy called the Arctic Policy Framework which seeks to build on previous policies. Much of the most recent policy is focused on improving the existing Arctic infrastructure (primarily transportation, energy, housing, and communications) for the indigenous population; sustaining the Arctic economy; improving scientific research; and protecting the environment. However, Canada's Arctic policy is not all inwardly focused.<sup>37</sup>

The issue of Canadian sovereignty is a national priority; the framework references the need for Canadian military forces, including the Coast Guard, to maintain a physical presence in the Arctic. This would allow the Canadian government to enforce maritime law and other regulations.<sup>38</sup> Canada still relies on American support and cooperation, but there are existing legal disputes that both sides have constructively worked to resolve through the Arctic Council.<sup>39</sup>

Norway is similar to Canada in that it has a significant interest in the Arctic region based primarily on its proximity to Russia, natural resources, and its Arctic coastline. In 2017, Norway updated its Arctic strategy to reinforce existing themes, which are quite similar to Canada. Norway is focused on international cooperation, business and knowledge development, infrastructure, and environmental protection in coordination with the Arctic Council. Norway has not sought to increase its military presence in the Arctic, though it has long-standing disputes with other Arctic countries.<sup>40</sup> Most notably, the dispute with Russia over a natural gas field in

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<sup>37</sup> Government of Canada. *Arctic Policy Framework Discussion Guide: Building a Strong Arctic Together* (Ottawa, Canada, 2017), 8-20. [http://publications.gc.ca/collections/collection\\_2017/aanc-inac/R74-37-2017-eng.pdf](http://publications.gc.ca/collections/collection_2017/aanc-inac/R74-37-2017-eng.pdf).

<sup>38</sup> Karen Everett, "Canada's Arctic Policy Framework: A New Approach to Northern Governance." *Polar Research & Policy Initiative*, May 18, 2018, <http://polarconnection.org/canada-arctic-policy-framework/>.

<sup>39</sup> Rolf Tamnes and Kristine Offerdal, eds. *Geopolitics and Security in the Arctic: Regional Dynamics in a Global World* (New York: Routledge, 2014), 74-77.

<sup>40</sup> Norwegian Ministries. *Norway's Arctic Strategy: Between Geopolitics and Social Development*. (Oslo, Norway: Norwegian Ministries, 2017), 6. <https://www.regjeringen.no/contentassets/fad46f0404e14b2a9b551ca7359c1000/arctic-strategy.pdf>.

the Barents Sea has recently been renewed.<sup>41</sup> None of these are flashpoints for larger conflict in the region, but underscore the political and economic complexity, especially in considering the United States' Arctic strategy.

### **United States Strategy in the Arctic**

The United States' policy has evolved over the years and has gained an elevated status in Washington since the greater awareness of climate change and its impacts. In 2013 the National Strategy for the Arctic Region was released by the Obama administration with the intent of augmenting the existing policies. The strategy explicitly references "diminishment of the sea ice and the emergence of a new Arctic environment."<sup>42</sup> In subsequent implementation plans and executive orders the theme of the Obama administration was that the strategic importance of the Arctic was growing and that it required a cohesive approach with the help of Arctic stakeholders.

In 2016 an Arctic Strategy was released based on a requirement from the Fiscal Year (FY) 2016 National Defense Authorization Act that changed the previous strategies up until that point. The changes were made to account for the changing security environment. The desired end-state for the DoD was a "secure and stable region where U. S. national interests are safeguarded, the U. S. homeland is defended, and nations work cooperatively to address challenges".<sup>43</sup>

The Trump administration has focused more on great power conflict which has colored the administration's Arctic policy. The high stakes nature of great power conflict has seeped into the Arctic region despite the efforts of the Arctic Council to abstain from security entanglements.

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<sup>41</sup> Rolf Tamnes and Kristine Offerdal, eds. *Geopolitics and Security in the Arctic: Regional Dynamics in a Global World*. (New York: Routledge 2014), 74-77, 82-84.

<sup>42</sup> The White House (*The National Strategy for the Arctic Region*. Washington, DC) May 2013, 2. <https://www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905.pdf>.

<sup>43</sup> US Department of Defense. *Report to Congress on Resourcing the Arctic Strategy*. (Washington, DC: Office of the Undersecretary of Defense for Policy, June 2016), 2, [https://dod.defense.gov/Portals/1/Documents/pubs/Report\\_to\\_Congress\\_on\\_Resourcing\\_the\\_Arctic\\_Strategy.pdf](https://dod.defense.gov/Portals/1/Documents/pubs/Report_to_Congress_on_Resourcing_the_Arctic_Strategy.pdf).

There has been a longstanding tradition of cooperation among Arctic nations that is likely attributed to the low strategic priority of the region as compared to other maritime environments, like the South China Sea or the Persian Gulf. The Arctic Council's agreement on search and rescue (SAR) responsibilities and the agreement for managing two-way shipping traffic through the Bering Strait and Bering Sea are both examples of practical cooperation among rivals that transcend strategic rivalries.<sup>44</sup>

The Trump administration has built on what the Obama and Bush administrations established but the policy directives have taken a different tone given the changing priorities. The December 2017 National Security Strategy (NSS) made only one reference to the Arctic related to collaboration with allies.<sup>45</sup> The summary of the 2018 National Defense Strategy (NDS) makes no mention of the Arctic at all.<sup>46</sup> However, in the National Defense Authorization Act for Fiscal Year 2019 (H.R. 5515/S. 2987) Congress has required the DoD to provide an updated Arctic Strategy no later than June 2019 with an additional report 180 days later on the details regarding the implementation of the strategy.<sup>47</sup>

The U.S. naval forces are left to translate this guidance into executable operations. The U.S. Navy's Arctic strategy does not explicitly reference Cable or the use of *Catalytic Force*, but it is implied in all the strategy documents since 2009. The *Cooperative Strategy for 21st Century Seapower*, published in 2015, clearly defines the strategic imperatives of the modern U.S. Navy.

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<sup>44</sup> Ronald O'Rourke. *Changes in the Arctic: Background and Issues for Congress-Updated*. CRS Report for Congress R41153 (Washington, DC: Congressional Research Service, December 13, 2018), 52, 58-59, <https://fas.org/sgp/crs/misc/R41153.pdf>.

<sup>45</sup> The White House, *The National Security Strategy of the United States of America*, (Washington, DC, 2018), 40, <https://www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905.pdf>.

<sup>46</sup> US Department of Defense, *Summary of the National Defense Strategy of the United States of America*. (Washington, DC, 2018) <https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>.

<sup>47</sup> US Congress. House. John S. McCain National Defense Authorization Act for Fiscal Year 2019. H.R. 5515/S. 2987. 115th Cong., January 3, 2018. <https://www.congress.gov/115/bills/hr5515/BILLS-115hr5515enr.pdf>.

The authors explain that “naval forces operate forward to shape the security environment, signal U.S. resolve, protect U.S. interests, and promote global prosperity by defending freedom of navigation in the maritime commons.”<sup>48</sup> If a country wishes to maintain leverage over other countries operating in the same maritime space, legitimate naval forces must be present, or at the least be able to get to the maritime space in a reasonable amount of time with an ability to project power. Related specifically to the Arctic, the document asserts that “the Sea Services will assess Arctic access and presence needs, improve maritime domain awareness, and pursue cooperation with Arctic partners to enhance the maritime safety and security of the region.”<sup>49</sup> In December 2018 the US Navy published *A Design for Maintaining Maritime Superiority (Version 2.0)* for the expressed purpose of aligning with the NSS and NDS and to conduct an assessment of the progress made on a broad range of initiatives.<sup>50</sup>

### **All Domain Access in the Arctic**

A June 2016 DoD report to Congress on resourcing the Arctic Strategy indicated that “the Department’s challenge is balancing the risk of being late-to-need with the opportunity cost making Arctic investments for potential future contingencies at the expense of resourcing other urgent military requirements.”<sup>51</sup> The current U.S. Navy strategy fits within Mahan and Cable’s view of maritime strategy, but it is not on a clear path to execute this policy. The U.S. Navy has not set the required conditions and infrastructure for all domain access. Specifically, maritime

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<sup>48</sup> Office of the Chief of Naval Operations. *A Cooperative Strategy for 21st Century Seapower* (Arlington, VA: United States Navy, March 2015), 9. <https://www.navy.mil/local/maritime/150227-CS21R-Final.pdf>.

<sup>49</sup> *Ibid.*, 18.

<sup>50</sup> Office of the Chief of Naval Operations. *A Design for Maintaining Maritime Superiority, Version 2.0*. Arlington, VA: United States Navy, December 2018, 1. [https://www.navy.mil/navydata/people/cno/Richardson/Resource/Design\\_2.0.pdf](https://www.navy.mil/navydata/people/cno/Richardson/Resource/Design_2.0.pdf).

<sup>51</sup> US Department of Defense, Report to Congress on Resourcing the Arctic Strategy (Washington, DC, June 2016, 14, [https://dod.defense.gov/Portals/1/Documents/pubs/Report\\_to\\_Congress\\_on\\_Resourcing\\_the\\_Arctic\\_Strategy.pdf](https://dod.defense.gov/Portals/1/Documents/pubs/Report_to_Congress_on_Resourcing_the_Arctic_Strategy.pdf).

domain awareness (MDA), sustainment, and infrastructure in the Arctic are not adequately addressed by the U.S. Navy to enable all domain access. Joint Publication (JP) 3-32 identifies these general planning considerations for any maritime operation.<sup>52</sup> It is unrealistic to believe that the U.S. Navy should assert maritime superiority over the Arctic. This is not feasible as the current environment stands. However, the U.S. Navy has not made substantive progress towards establishing the groundwork for all domain access in order to facilitate these essential U.S. Navy functions that may be required at some later date.<sup>53</sup>

The maritime nature of the Arctic dictates that the joint force will rely heavily on the expeditionary capability of the U.S. Navy to provide access into and project power from the Arctic seas. Despite its inherent expeditionary capability the U.S. Navy still relies on a certain amount of infrastructure to sustain and maintain the fleet. Without this infrastructure the U.S. Navy will not require the Russians and Chinese to plan for its presence. The will essentially be able to continue on their current paths.

United States submarines are currently able to operate in the Arctic; but, according to Jeffrey Barker, the deputy branch head for policy and posture on the CNO's staff (OPNAV N515B), "adding surface warships to the region in the near future as another maritime deterrent is slim."<sup>54</sup>

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<sup>52</sup> Joint Chiefs of Staff. Command and Control of Joint Maritime Operations. Joint Publication 3-32. Arlington, VA: Department of Defense, June 8, 2018, I-3. [https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3\\_32.pdf?ver=2018-07-23-161257-897](https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_32.pdf?ver=2018-07-23-161257-897).

<sup>53</sup> US Department of Defense, Report to Congress on Resourcing the Arctic Strategy (Washington, DC, June 2016, 19-21, [https://dod.defense.gov/Portals/1/Documents/pubs/Report\\_to\\_Congress\\_on\\_Resourcing\\_the\\_Arctic\\_Strategy.pdf](https://dod.defense.gov/Portals/1/Documents/pubs/Report_to_Congress_on_Resourcing_the_Arctic_Strategy.pdf); All domain access is a US Navy term established in the March 2015 *Cooperative Strategy for 21st Century Seapower.*, which defines it as the function that assures appropriate freedom of action in any domain--the sea, air, land, space, and cyberspace, as well as the electromagnetic (EM) spectrum. Joint Publication (JP) 3-32 further explains that because access to the global commons is critical, the strategy introduces a fifth function: all domain access. The US Navy has typically performed four essential functions: deterrence, sea control, power projection, and maritime security.

<sup>54</sup> John Grady, "Pentagon Balancing Military Needs in the Arctic, Future Infrastructure." *USNI News*. December 5, 2018, <https://news.usni.org/2018/12/05/pentagon-balancing-military-needs-arctic-future-infrastructure>.

These limitations are due to the reality of providing logistical support to naval forces a great distance from U.S support infrastructure in Alaska and the austere environment in the Arctic. Secretary of the Navy Richard Spencer has indicated that the U.S. Navy is exploring the potential of opening a strategic port in the Bering Sea, but that will require significant funding to come to fruition.<sup>55</sup> Additionally, the U.S. only has two ice breakers in its inventory which limits the operational reach of naval forces.<sup>56</sup>

### **Enhanced Maritime Security Partnerships with Arctic Nations**

The U.S. Navy must now consider the Arctic in terms of future policy, strategy, force structure, and investments.”<sup>57</sup> Ratification of treaties or conventions is the responsibility of the U.S. Congress, but U.S. naval leadership should clearly identify the operational gains of ratifying UNCLOS, especially the benefit in having a more cohesive relationship with Arctic partner navies.<sup>58</sup>

In the 2011 Navy Arctic Environment Assessment and Outlook Report, the authors asserted that “although the Navy submarine fleet has decades of experience operating in the Arctic, the surface fleet, air assets, and U.S. Marine Corps ground troops have limited experience there.

Since the 2010 DoD Quadrennial Defense Review (QDR) there has been a slow evolution in understanding and military thinking regarding the Arctic. There have been substantive changes to the DoD structure and policy to address the problem, including moving the entire Arctic

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<sup>55</sup> Joseph Trevithick, “U.S. Navy Plans to Send More Ships into the Arctic as it Looks to Establish New Polar Port.” *The Warzone*, January 9, 2019, <https://www.thedrive.com/the-war-zone/25875/us-navy-plans-to-send-more-ships-into-the-arctic-as-it-looks-to-establish-new-polar-port>.

<sup>56</sup> Ibid.

<sup>57</sup> Ronald O’Rourke. *Changes in the Arctic: Background and Issues for Congress-Updated*, (CRS Report for Congress R41153. Washington, DC: Congressional Research Service, December 13, 2018), 81, <https://fas.org/sgp/crs/misc/R41153.pdf>.

<sup>58</sup> Committee on National Security Implications of Climate Change for U.S. Naval Forces Staff. *National Security Implications of Climate Change for U. S. Naval Forces*, National Academies Press, 2011, 2-4. <https://ebookcentral.proquest.com/lib/usmcu-ebooks/detail.action?docID=3378775>.

region under U.S. Northern Command (NORTHCOM) and working with NATO allies and the Arctic Council to refine governance in the region.<sup>59</sup> In May 2018 the U.S. Navy re-established the Second Fleet in Norfolk, VA focused on the Atlantic and Arctic regions. A legitimate step towards operationalizing the strategic guidance from Washington. The Second Fleet is currently working towards full operational capability (FOC) with a goal of being expeditionary and the ability to command and control forces while forward deployed.<sup>60</sup> This is a good initial step in the right direction but must be reinforced with forces rotating through the Arctic to build familiarity in the region and with Arctic partners. The Second Fleet is still in the nascent stages of being operationally effective.

In fall 2018 the US and NATO allies conducted the largest exercise since the Cold War, mostly operating in what is commonly referred to the Greenland-Iceland-United Kingdom Gap. Exercise Trident Juncture 18 was considered a success on several fronts, but naval leaders also expressed concerns about naval forces operating in the harsh Arctic conditions against a peer threat.<sup>61</sup> This NATO exercise was the latest example of an attempt by the US and its NATO allies to militarily blunt Russian aggression in the High North. The exercise was not postured to prevent Russian aggression within the Arctic Circle, rather it was part of the northern flank of a NATO deterrence on continental Europe. The mixed reviews on the US Navy's ability to operate in a similar region is a cause for concern.

## **Conclusion: Managing Uncertainty**

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<sup>59</sup> Jim Garamone, "Unified Command Plan Reflects Arctic's Importance," *American Forces Press Service*, April 7, 2011, <http://archive.defense.gov/news/newsarticle.aspx?id=63467>.

<sup>60</sup> Office of the Chief of Naval Operations. *A Design for Maintaining Maritime Superiority, Version 2.0*. Arlington, VA: United States Navy, December 2018, 8. [https://www.navy.mil/navydata/people/cno/Richardson/Resource/Design\\_2.0.pdf](https://www.navy.mil/navydata/people/cno/Richardson/Resource/Design_2.0.pdf).

<sup>61</sup> Christopher Woody, "'We Can Do Better': The Navy's Newest Fleet Commander Says US Ships and Sailors got 'Beat Up' During NATO's Biggest Exercise Since the Cold War," *Business Insider*, December 4, 2018, <https://www.businessinsider.com/us-ships-and-sailors-got-beat-up-during-natos-massive-war-games-2018-12>.

The primary difficulty in planning for the Arctic is uncertainty; however this uncertainty can be effectively managed. United States naval strategy in the increasingly important Arctic must be founded in Cable's *Catalytic Force*, specifically through maritime all domain access and enhanced maritime security partnerships with Arctic nations. The U.S. naval forces are uniquely positioned to confront the issues at hand and positively influence fragile security relationships with competing powers.

It is tenuous to draw an analogy to Chinese intransigence in the South China Sea or Russian "grey zone" tactics to the current geopolitical situation in the Arctic. The Arctic is peaceful and has been consistently characterized by cooperation, partly through the Arctic Council acting as a responsible body of governance. Drawing on past behavior or trends can be disastrous to United States strategic interests in the region. Both Russia and China are investing heavily in the region and elevating the Arctic's importance within their respective national security structure. If the United States does not act with funding and resourcing to match the verbiage in the policy they will lose the edge in the region.

According to the U.S. Navy's policy branch, an updated Arctic strategy is going through the final approval process at the service level and will likely be published in the summer of 2019. The Navy is mandated by Congress to do this, but it is especially timely because of the rising importance of the Arctic. If the U.S. Navy is going to effectively implement its own strategy and policy papers it should use *Catalytic Force* as a guiding model. As previously referenced the U.S. Navy is taking steps toward a legitimate maritime presence in the Arctic that will facilitate its mandated missions, specifically all domain access.

## Glossary

**All domain access:** The ability to project military force in contested areas with sufficient freedom of action to operate effectively. (*A Cooperative Strategy for 21st Century Seapower*)

**Archipelagic waters:** A baseline drawn between the shoreline and the outermost point of the outermost islands, with the nation maintaining sovereignty over those waters. (UNCLOS)

**Arctic Bridge:** The Arctic Bridge is a potential route that links the Port of Churchill in northern Manitoba, Canada with western parts of Russia and Scandinavia. The Port of Churchill is ice-free in the summer months and is served by a rail line extending to the Canadian national railway system. (International Maritime Organization)

**Arctic Circle:** The imaginary line that circles the globe at approximately 66° 34' N. (National Snow and Ice Data Center)

**Arctic Council:** A high level intergovernmental forum to provide a means for promoting cooperation, coordination and interaction among the Arctic States, with the involvement of the Arctic Indigenous communities and other Arctic inhabitants on common Arctic issues, in particular on issues of sustainable development and environmental protection in the Arctic. (Arctic Council)

**Arctic region:** The isothermal layer. (National Snow and Ice Data Center)

**Continental shelf:** The natural prolongation of the land territory to the continental margin's outer edge, or 200 nautical miles from the coastal state's baseline, whichever is greater. (UNCLOS)

**Destination shipping:** The movement of bulk resources (such as oil, gas, liquefied natural gas, or minerals) from the point of extraction to markets outside of the Arctic region. (International Maritime Organization)

**Deterrence:** The prevention of action by the existence of a credible threat of unacceptable counteraction and/or belief that the cost of action outweighs the perceived benefits. (JP 3-0)

**Exclusive economic zone (EEZ):** Extends out 200 nautical miles from the baseline where the nation has sole exploitation rights over all natural resources. (UNCLOS)

**Extended continental shelf:** Where the continental shelf extends beyond 200 nautical miles a State is required by UNCLOS (Article 76) to make a submission to the Commission on the Limits of the Continental Shelf (CLCS). This submission sets out the coordinates of the outer limits of the shelf and is accompanied by technical and scientific data to support the claim. The Commission assesses the limits and data submitted by the coastal State and makes recommendations. (UNCLOS)

**International waters:** Those waters extending outside of territorial waters. (UNCLOS)

**Maritime domain:** The oceans, seas, bays, estuaries, islands, coastal areas, and the airspace above, these, including the littorals. Nothing in the definition of, or the use of the term domain, implies or mandates exclusivity, primacy, or C2 of that domain. The littoral comprises two segments of the operational environment (OE). First, “seaward: the areas from the open ocean to the shore, which must be controlled to support operations ashore.” Second, “landward: the area inland from the shore that can be supported and defended directly from the sea.” (JP 3-32)

**Maritime domain awareness (MDA):** The effective understanding of anything associated with the maritime domain that could impact the security, safety, economy, or environment of a nation. (JP 3-32)

**Maritime Power Projection:** Power projection in and from the maritime environment, including a broad spectrum of offensive military operations to destroy enemy forces or logistic support or to prevent enemy forces from approaching within enemy weapons’ range of friendly forces. (JP 3-32)

**Maritime security operations (MSO):** Those operations to protect maritime sovereignty and resources and to counter maritime-related terrorism, weapons proliferation, transnational crime, piracy, environmental destruction, and illegal seaborne migration. (JP 3-32)

**Maritime superiority:** That degree of dominance of one force over another that permits the conduct of maritime operations by the former and its related land, maritime, and air forces at a given time and place without prohibitive interference by the opposing force. (JP 3-32)

**Maritime supremacy:** That degree of maritime superiority wherein an opposing force is incapable of effective interference. (JP 3-32)

**Northern Sea Route:** The NSR stretches across the Russian Arctic linking Asian and Northern European markets. It typically is the first route to be ice free in the summer. Maritime traffic has started to develop along the NSR since the creation of the Northern Sea Route Administration (NSRA) in 2012. (International Maritime Organization)

**Northwest Passage:** The NWP is a complex of channels through the Canadian Archipelago. A few trial transits of dry bulk cargo and cruise operations have been successfully carried out to date, but some projections estimate the NWP to become usable on a regular basis by 2020-2025. (International Maritime Organization)

**Operational access:** The ability to project military force into an operational area with sufficient freedom of action to accomplish the mission. (JP 3-0)

**Sea control operations:** The employment of forces to destroy enemy naval forces, suppress enemy sea commerce, protect vital sea lanes, and establish local military superiority in vital sea areas. (JP 3-32)

**Territorial waters:** Extend 12 nautical miles from the baseline (shoreline). (UNCLOS)

**Transit shipping:** Routes that connect the trading hubs of the world. (International Maritime Organization)

**Transpolar Sea Route:** The Transpolar Sea Route extends directly across the Arctic Ocean to link the Bering Strait with the North Atlantic. This route is currently hypothetical as it requires an essentially ice-free Arctic Ocean. (International Maritime Organization)

**United Nations Convention on the Law of the Sea (UNCLOS):** The seminal document that governs nations operating in international waters and defines the maritime environment. (UNCLOS)

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